Medical
AUG 5 1926
cupboard.

The

British Medical Journal

THE JOURNAL OF THE BRITISH MEDICAL ASSOCIATION.

WITH SUPPLEMENT.

No. 3420. SATURDAY, JULY 24, 1926. Price 1/3

THE PRESENT STATUS OF DIABETES TREATMENT.

The chances of the diabetic patient are better to-day than at any time in the history of medicine. Carefully prepared statistics show that the duration of life has greatly increased, and with, the extension of knowledge of the disease and of modern treatment, will probably continue to increase. Even in those cases in which a cure is not probable, life may be extended, and the greater number of such cases may now enjoy life and usually lead comfortable and self-supporting careers.

In general medicine the evidence of the value of Trypsogen, a product of the whole pancreas, is very striking. Reports of its use show that it aids in the utilization of sugar by the body, depresses a relative adrenal hyperfunction, lessens polyuria, decreases glycosuria, aids in re-establishing normal carbohydrate metabolism, and exerts a remarkable action in improving the subjective symptoms of diabetes.

A sample of Trypsogen will be sent to members of the medical profession on request.

G. W. CARNRICK CO.,

Dependable Gland Products

417, CANAL STREET, NEW YORK.

London Agents: BROOKS & WARBURTON, Ltd., 40-42, Lexington Street, London, W.1.

Specify—CARNRICK.

kaolin, sodium carbonate, and sulphur. The sulphur in the compound is in a form kindred to that of the sulphur in liver of sulphur, the sulphurated potash of the *British Pharmacopœia*. The other components of washing blue have alkaline properties, but are otherwise physiologically inert. As the pain from the sting of a bee or wasp is believed to be due chiefly to the acid injected, it must be concluded that the sulphur contributes nothing to the relief from smarting. There exists no analogy from which to infer that such a compound of sulphur could mitigate pain. It is said that ammonia allays the pain of a sting even more quickly than the blue bag. It might be assumed then that the relief produced by the blue bag is due to the alkalinity of its contents, but the acceptance of this view is checked by the objection that if such were the case washing soda would be better than blue; and, if better, would be generally used in preference, as it is at hand in every kitchen. There is a further difficulty that if the blue bag was good a simple inunction of washing blue made into a paste ought to be better. Again, if that were the case there is little doubt that the paste would have superseded the bag. It is thus necessary to look to the fabric of the bag for an explanation. The idea that the bag may be important is not to be summarily dismissed. After the blue bag has been in use for some time the fibres of its fabric become covered with particles of the less soluble silicates which adhere by an adsorptive property. The film of silicate on the fibres, although but slightly soluble, contains alkali capable of effectively neutralizing acid. Moreover, the fibres are not softened by this alkali as they would be by a solution of soda; they retain a degree of stiffness and are capable of penetrating the puncture of the sting when the blue bag is dabbed on. With a flannel blue bag this quality is more pronounced than with one of cotton fabric. This reasoning seems also to furnish a valid explanation why the blue bag is better than a cloth moistened with solution of soda, for the fibres of such a cloth would not penetrate the puncture. If washing soda is less effective as a simple application than ammonia, this may be because the acid injected by the sting, being of appreciable concentration, at once produces a microscopic bubble of carbon dioxide on contact with the solution of soda. Such a bubble lodged in the aperture of the puncture would stop the entry of the soda.

It has been stated, we seem to remember, that the irritant fluid injected by a bee sting differs from that of a wasp sting, the one being alkaline in reaction and the other acid; but we are not aware that this has been confirmed, and a well informed correspondent insists that both are acid. It seems to be a matter of general observation that the same remedies are equally effective or ineffective in both.

LETTERS, NOTES, ETC.

SOUTHWELL MINSTER.

MR. RUSSELL COOMBE (Exeter) writes: It is to be hoped that no member of the British Medical Association who has not already visited Southwell will fail to take advantage of the opportunity which the Nottingham Annual Meeting offers. The nave of Southwell Minster (now cathedral) provides a magnificent example of a Norman nave. One of the original Norman aisle windows remains on the north side and illustrates one of the great disadvantages of the Norman churches—the smallness of the windows and consequent darkness of the buildings. The clerestory windows at Southwell again show the same point. The western door is a fine specimen of a Norman door, but the chief feature of the Norman work at Southwell is the porch on the north side of the nave, which is only doubtfully equalled (certainly not surpassed) elsewhere in England. But the crowning glory of Southwell is the decorated chapter house. Were there nothing else of interest in the cathedral, this alone more than repays even a long journey to see it. Of it Street, the architect of the Law Courts, says: "What either Cologne, Ratisbon, or Weisen are to Germany; Amiens Cathedral or the Sainte Chapelle are to France, the Scalegere in Verona is to Italy, are the choir of Westminster and the Chapter House at Southwell to England." Another authority says: "It is impossible to conceive anything more beautiful. It is the most perfect work of the most perfect style of Gothic architecture."

EX-RESIDENTS, NORFOLK AND NORWICH HOSPITAL.

THE honorary staff of the Norfolk and Norwich Hospital has issued a circular letter to ex-resident medical officers inviting them to contribute to a fund to furnish rooms for Miss Bindley, known to them all as "Maria," who is retiring from the position of officers' maidservant after completing over fifty-one years' service. The board of management has granted her a pension. Contributions for the furniture not exceeding 1 guinea may be sent to Mr. Frank Inch, house governor and secretary, Norfolk and Norwich Hospital, Norwich. As there is difficulty in tracing the addresses of all residents it is hoped that those who may not have received the circular letter will act upon this intimation.

PUERPERAL SEPSIS.

DR. W. B. HUNTER (Londonderry) has written to express the view that it would be well that pre-natal investigators should examine into the general condition of health in women presenting themselves before parturition as well as into the size of the pelvis or state of the kidneys. He asks how it is that puerperal sepsis is as rife now as it was, say, forty or fifty years ago, when nothing was known of sterilization of hands, or clothes, or instruments by the practitioner. "Before examining a case," he says, "we sometimes did not even wash our hands, and used any grease or ointment we could come across for anointing the examining finger; when using the forceps any grease was used for smearing the blades, which had for a moment been dipped in some warm water. There was no flushing out of the vagina or washing the external parts with any antiseptic lotion. Antiseptics then were only beginning to be talked of in general surgery, but not thought of in midwifery practice. Yet a puerperal case of sepsis was very rarely encountered. If these conditions in medical attendance obtained now amongst the majority of women in childbirth I have no doubt they would die in great numbers of sepsis. The women of the days I speak of were able to obtain and use good wholesome and nourishing, though simple and plain, food, and thereby got sufficient stamina to resist and overcome the invading toxin or virus. The women who are now overcome live chiefly on white flour bread and tea, with some confectionery rubbish in addition. Consequently they fall easy victims to the attacking toxins. They fail to produce Nature's great life agent and protector in sufficient numbers or efficiency—namely, the phagocyte; the streptococcus is able to conquer the phagocyte. With the well nourished and properly dieted woman the phagocyte prevails and the woman lives. These remarks apply to both exogenous and endogenous pathogenic germs, the latter always being present."

SMALL BOYS AND WESTMINSTER BRIDGE.

"PRO RE NATA" writes: I was interested to see an account in the public press of a small boy who put his head through one of the trefoil openings in the side of Westminster Bridge and could not get it back again. In 1900, whilst passing over the same bridge, I saw a boy in exactly the same predicament. He was surrounded by a big crowd and two policemen were busy smearing his head with soft soap in an endeavour to get him out. I offered my services and was told by one of the policemen to mind my own business and "get away out of it." This I did, having one or two matters to attend to in the Strand, and on my return two hours later was surprised to see the poor little fellow in exactly the same position but very much the worse for wear and whimpering feebly. I accordingly went to one of the policemen and suggested that, as they had been unsuccessful and as the boy was showing signs of considerable exhaustion, I might now be permitted to make an attempt to extricate him. At the time they were using a file in an endeavour to enlarge the opening. "All right," said the constable; "if you think you can do better than we can, have a go." Speaking obstetrically, the boy had obviously inserted his head in a position of extreme flexion and, after getting it through the opening, had extended it. This could be seen plainly on looking over the side of the bridge, and it was, in fact, the only position in which he could maintain himself fairly comfortably. It was the problem of the after-coming head. I accordingly flexed his head strongly upon his chest. To get his chin well down to his chest I had to push him a little further through the hole, as his tendency was to pull back and so keep up extension. It took just over half a minute to extract him, amid loud cheers from the crowd. It is a fairly certain thing that if a head can be made to go through one of the openings it can be made to retrace the path by which it entered, and it seems a pity that the bridge should have been damaged to the extent of using a hacksaw, especially as doctors are reported to have been on the spot to assist the police force and the fire brigade.

PRONUNCIATION OF MEDICAL TERMS.

MR. ALEX. E. ROCHE, M.Ch., F.R.C.S. (London, W.) writes: The derivation of scientific terms is always of interest, but has little effect on the pronunciation sanctioned by usage. According to their transcription from φθίσις, διφθέρα, παρωτίς, and καρωτίδες, the first i in phthisis should be pronounced as shortly as the second; the e in diphtheria short (as in "error"); the o in parotid and carotid long (as in "doted"). As we flagrantly neglect etymology in the pronunciation of these and hundreds of other words, why worry about "angina"?

ALCOHOL MOTOR FUELS.

AT the congress of chemists arranged by the Society of Chemical Industry to take place in London next week (July 19th to 23rd) some interesting records will be given of the use of alcohol as a motor fuel. It appears that the Queensland Government, the Distillers' Company, and others are producing alcohol from molasses and starch-bearing crops in Queensland. The German Government has also put on the market a fuel consisting chiefly of alcohol. The tests that have been made with the fuel show that many millions a year would be saved by its use if engines were altered to work on 6½ to 1 compression.

METHOD OF TREATING ASTHMA BY RADIATION.

Correction.

WE are asked by Dr. S. Gilbert Scott to correct an error in his preliminary note on this subject published in the JOURNAL of June 5th. Under the heading of "Technique" (p. 940, col. 1) "25 mm." should read "25 cm."

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 49, 52, 53, 56, and 57 of our advertisement columns, and advertisements as to partnerships, assistantships, and locumtenencies at pages 54 and 55.

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 44.

British Medical Association.

NINETY-FOURTH ANNUAL MEETING, NOTTINGHAM, 1926.

President's Address

ON

THE MEDICAL PRACTITIONER AND THE PUBLIC.

BY

ROBERT GEORGE HOGARTH, C.B.E., F.R.C.S.,

SENIOR SURGEON, GENERAL HOSPITAL, NOTTINGHAM.

My first duty to-night is strictly personal. It is to express my heartfelt appreciation of the great honour conferred upon me. To be President of the British Medical Association is—I hope I speak without bias—to be the President of the finest professional association in the world. I can truthfully add that no one in the fast lengthening line of my predecessors in office has entered upon the duties of the Presidency with a greater realization of his own inadequacy to fulfil them as they might be fulfilled, or with a more earnest desire to bring to such fulfilment the very utmost of which he is capable.

The Nottingham Meeting of 1892.

May I next remind you of the Association's last visit to Nottingham in 1892—more than thirty years ago? That was before I came to Nottingham, and I certainly had no visions or premonitions that the next time the Association met here I should occupy this exalted position. What made that Nottingham meeting memorable was that then, for the first time, the Association, by its vote, admitted women to its full membership. I will not rake over the cold ashes of that dead controversy except to say that no one, so far as I know, regrets that decision to-day, or if he regrets it, deems it expedient to say so, or wishes that it had been further postponed. The wonder now is rather that the prejudice—for time has proved that it was only a prejudice—lasted so long.

There is now no degree or diploma, no office, no honour, no post in the medical profession (at any rate on the civil side) which is not open equally to women as to men, and I shall be well satisfied if, in the years to come, the present Nottingham meeting of the Association has as good cause to be remembered with honour and with gratitude, either for some signal reform or some wise and judicious decision, as was the earlier meeting in 1892.

Nottingham and its Surroundings.

The abundant literature about Nottingham which all of you have doubtless received makes it quite unnecessary for me to sing the praise of a city which has a glorious past, both in fact and legend, a prosperous present, and a future bright with hope. You will be able to judge for yourselves whether report speaks in terms too flattering or in terms not flattering enough of Nottingham's varied charms. All I wish to say is that the local members of the Association are immensely proud of the visit of their colleagues from all parts of the Empire, and are deeply grateful to the civic authorities, and indeed to all who have collaborated so generously in the preparatory work necessary to make the visit a success.

We who practise our profession in this ancient yet modern city by the Trent invariably find all classes of the population singularly responsive to the many and recurrent humanitarian claims of her medical institutions. You will see the evidence of that in many a fine building, and in none displayed more nobly than in the magnificent Home to Nurses, which is built almost on the very spot where Charles I raised his standard at the opening of the Civil War. The city which chose that home for a war memorial will be proud to show her famed hospitality to those who practise medicine.

The March of Medical Science.

The decrease in the general rate of mortality is one of the most striking proofs of the rapid forward march of medical science. It has fallen by nearly one-half in fifty years. Had the birth rate been maintained the Malthusian doctrine would have enjoyed a new lease of life, and we should now be talking in awed tones of the "hungry generations" treading us down. But it has fallen by even a larger proportion in the same period, and the net total figures of the population only continue to show an increase because of the longer life.

It is a great triumph that a large percentage of humanity can now so far outrange the Psalmist's three score years and ten, and, instead of the added years entailing heaviness and sorrow, can still enjoy the pleasures of a discreetly ordered table and the beneficent exercise of the veteran's game at golf. By taking thought and following advice we can lengthen out the measure of our days and look forward with some confidence to a green old age. This prolongation of life—active life of course I mean, though the pace may slacken—is, I say, a great achievement in itself, especially if we agree with Scipio's reason for regretting that so few attained old age—namely, that if more attained it life would be lived in better and in wiser fashion.

Yet is there not a real danger of attaching too much importance to the triumphant statistics of mortality without due consideration of their actual content? Mere prolongation of life is of little good in itself, either to the individual or to the nation, unless there is a real capacity to enjoy it. All medical men meet with cases where the efforts made to prolong the life of a patient who is far past effective help hardly seem a kindness to the sufferer and often bring those about him to the breaking-point. Far more desirable than to make a brave show in the statistical tables and increase the number of nonagenarians and centenarians is to raise the general standard of health among all ages of the community.

The Practitioner's Duty to the State.

Let us look at this question from the point of view of the State, since our duty to the State, according to some people, seems to be reckoned higher than our duty to ourselves. During the war public opinion was shocked to discover that the C3 category was so large in comparison, not with the A1, but with the B's and even with the C's. But it did not surprise the doctors, who knew the long catalogue of disabling ailments which afflict the general mass of the people.

The first sets of figures published by those who medically examined the school children in the elementary schools had already given clear warning. If such distressing percentages prevailed among the children between the ages of 5 and 15, what was to be expected when they grew to manhood? Moreover, a swollen C3 category of men

Valentine's Meat-Juice

In **Typhoid Fever, Diarrhoea and Cholera Infantum,** when it is **Essential** to **Sustain** the patient **without irritating** the **Digestive Organs,** the **Ease** of **Assimilation** and **Power** of **Valentine's Meat-Juice** to **Restore** and **Strengthen** has been demonstrated in Hospital and Private Practice.

THE quickness and power with which VALENTINE'S MEAT-JUICE acts, the manner in which it adapts itself to and quiets the irritable stomach, its agreeable taste, ease of administration and entire assimilation recommend it to physician and patient.

VALENTINE'S PREPARATION
NUTRIO PER ME
VOLUME 1 1/5 OZ.
MEAT JUICE
DIRECTIONS. Dissolve one teaspoonful of the Preparation in three tablespoonfuls of cold or warm water; boiling water changes the character of the preparation.

Physicians are invited to send for brochures containing clinical reports.

For sale by European and American Chemists and Druggists.

VALENTINE'S MEAT-JUICE COMPANY,

Richmond, Virginia, U. S. A.

WB 302

than thirteen thousand medical practitioners on the panels. These are not, as some ill informed critics of the service would seem to assume, a separate and inferior class of medical men. They are in every sense of the word general practitioners, and the service they give is a general practitioner's service.

To each patient on his list the insurance practitioner accepts the relationship of a family doctor, just as he would do if he were called in by a private patient. He gives to each the skill and the attention within his power, and he gives them, as a rule, cheerfully and willingly, as he has contracted to do. One sometimes hears general complaints of too rapid and casual a diagnosis; but when the waiting room is full the same complaints are not wholly unheard even in the most august thoroughfares of the London specialists. The true test of value of the service given is to be found in the fact that in 1924 only 404 complaints were received by Insurance Committees and investigated by their expert subcommittees, and in only four cases did the more serious charges result in the removal of the practitioners' names from the Medical List.

Is it likely that a better service would be provided if each insurance practitioner were selected for inclusion in the list by some official of the Ministry of Health, and if he were required to give an even more detailed and minute account of his practice and submit still more voluminous reports? The panel would still be composed of exactly the same people, and even if the allotted quota of patients were reduced, is it at all certain that the individual patient would receive a greater share of the doctor's attention?

We know what happens in all State services. The red-tape machine would soon be started; more and more reports would be called for; the doctor might see fewer patients, but the volume of his activities would be in no wise lessened; and the cost of the service to the taxpayer would be enormously increased. You will not make the panel doctor a better doctor by making him more of a civil servant and less of a doctor; nor will you make the thirteen million patients more contented with their treatment.

The reform that is most required in connexion with the insurance service is one which shall link up the insurance practitioner with the consultant physician and the consultant surgeon, and give the insured patient the benefit of the profession's specialized as well as of its general knowledge.

THE VOLUNTARY HOSPITALS.

Nowhere is the principle of voluntaryism so well worth maintaining as in connexion with the hospitals; nowhere has it been so triumphantly maintained. It is sometimes suggested that the chief virtue of voluntary agencies is to do the rough pioneer work in difficult and intractable places, to create a favourable public opinion, and then, in due process of time, to hand over control to some department of State which will carry on the work upon an altogether larger scale. Indeed, I have seen it stated that voluntaryists ought to be proud to merge their small individualities into the larger being of a public department and to lose themselves like rivers in the sea. But the enthusiastic friends of the voluntary hospitals are human beings, not mere charitable machines which function altruistically because their well disciplined hearts happen to be set that way. They are proud of their work. They love it. They see results which encourage and inspire them. They do not want to sink themselves, but to express themselves. The gratitude of those who are healed is sweet in their ears. Voluntaryism is the very life and soul of the whole hospital movement.

It is not suggested that the hospitals would wither if the voluntary principle were abandoned. They would still multiply and prosper. Their orderly routine might well show an even more brilliant and imposing efficiency. But the rules and regulations would lengthen. The spirit of the institution would suffer change and lose something—I fear much—of its geniality and kindliness. Why is it that such a difference exists to-day between the voluntary hospital and the Poor Law infirmary, which is often better constructed and much better equipped? If you ask a patient to which he would rather be sent, why does he always say the hospital? To some extent the old hard, unforgettable associations and traditions of the Poor Law still chill the heart. But that is not the whole truth. There is something inherent in officialdom which freezes the genial current of the soul, and thaw it as you will by the application of whatever new principles of kindliness and mercy it can never be thawed right out.

Hospitals and the State.

Other countries have their State hospital services. Some of you may remember that certain British delegates who visited the show hospital of the Medical State Service of Soviet Russia were enormously impressed by the fresh-water tank in which they saw the live fish which were to serve for the patients' dinners. I wondered when I read the passage how many fish they counted, whether so much as the heads and tails reached the patients in the wards, and whether even this agreeable luxury was much compensation for the complete inadequacy of that particular State medical service to cope with a hundredth part of 1 per cent. of the disease and suffering in Russia.

Let us stand by the principle of voluntaryism in the hospitals at whatever cost of energy and patience required for their adequate provision and efficient maintenance. I need not remind this audience that it will take a vast and sustained effort to provide the 10,000 additional beds which the Voluntary Hospitals Commission has declared to be necessary. For that effort the friends of the hospitals will soon have to brace themselves. There is to be no financial assistance from the State. The Minister of Health last February very reluctantly came to the conclusion that no subvention was possible, at any rate at the moment, and so the hope that the Government might repeat its unconditional grant of half a million to the hospitals after the war, in recognition of their invaluable war work and of the utter impossibility during the war period of keeping abreast of their requirements, has been cast to the ground.

Unless this second grant had been as unconditional as the first, I do not know that I am altogether sorry at the Government's decision. If the Ministry had begun to impose conditions of control, it might well have marked the beginning of the end of the voluntary system. I contend that the work done by the hospitals is of such inestimable value, and the confidence placed in them by the public is so well justified, that the State, if it makes any subvention at all, should do so without restrictions, knowing that the money will be judiciously expended. The hospitals should beware of even the mildest beginnings of State control and the relentless, however friendly, grip of any State department.

However, as there is to be no grant these particular anxieties do not arise, and the supporters of the hospitals must shoulder their burden. So large a sum as four or five millions for new capital expenditure will take a very considerable time to raise; for, over and above all this, the maintenance cost has to be found for each new bed provided, and this means an additional recurrent annual cost of £148 per bed. Many of us were disappointed that once again the Chancellor of the Exchequer in the last Budget failed to exempt bequests to hospitals from liability to legacy duty. That is claimed as an act rather of justice than of grace. The toll taken by the State is an interception of charity which is repugnant to good feeling and a sense of fair play to the suffering.

The hospitals, of course, in their turn, owe to their generous supporters the duty of sound economic management, which in turn depends primarily upon the choice of governors. Those which show the best financial balance sheets usually have upon their board of management some outstanding figure of marked ability who has made the local hospital his hobby, his interest, his care, and his pride. However that may be, there must be the undoubted assurance of economic and prudent management if the full support of the public is to be continued. It may well be that a closer co-operation between hospitals—large and small, general and special—is possible and desirable, and that considerable economies might be effected without infringing the real autonomy of each institution, which is so properly and jealously guarded. Charitable effort in this country has always been specially subject to the besetting sin of overlapping and wasteful management; voluntaryists

between 18 and 45 necessarily means a still larger percentage of the same category between 45 and 65, after which year, presumably, very few of these damaged people contrive to earn a livelihood. What is true of the men applies no less to the women, and so we have throughout the country an enormous mass of bruised and damaged humanity which never enjoys robust health, which is continually ailing, which provides a multitude of victims for every epidemic, and which, regarded from the purely economic standpoint, never approaches full industrial efficiency, because it is never fit and alert.

I would not paint the picture in too sombre colours. Most of the world's work is routine work, which can be got through more or less satisfactorily at ordinary times, whether, for the purpose of the military category, a man is classed C3 or B2. Nevertheless, the C3 man will be oftener on the sick list; he will make more mistakes; he will produce less; he will lose his job sooner; and at any moment of emergency he will be less trustworthy and reliable. His physical deficiencies will increase with the passing years; he will be less able to protect himself and his family; he is more likely to seek support or stimulant from alcohol and then begin to suffer from its cumulative effect. Would it not therefore be better for the State if we took pride, not in rewriting the tables of mortality, but in raising the C3 people to a higher category—not in view of distant military contingencies, but for the immediate purpose of rendering them more efficient citizens, more valuable producers of wealth, parents of a healthier stock, and themselves more contented with their lot?

If we regard the great stagnant pools of ill health and the infinite variety of debilitating ailments, deep-seated and chronic, we are driven to the conclusion that physical inefficiency is at once the most permanent and fruitful cause of individual unhappiness and social discontent. Walt Whitman's lines are worth recalling in this connexion:

> "I think I could turn and live with animals,
> They are so placid and self-contained;
> I stand and look at them, long and long;
> They do not sweat and whine about their condition,
> They do not lie awake in the dark and cry for their sins,
> Not one is dissatisfied, not one is demented with the mania of owning,
> Not one is respectable or unhappy over the whole earth."

Humans are like animals at least in this, that if they are to be happy and contented they must either keep fit or be kept fit; and the honour of being considered the greatest benefactor to mankind belongs not, as is so often said, to him who can make two blades of grass grow where only one grew before, but to him who can add most to the science of health and raise the standard of fitness throughout the whole community. Surely that would be of more instant value to the State than the preservation of infant life in the first year of existence and the indefinite prolongation of what used to be called the allotted span. If there be any who dislike such a comparison of human values, they may be reassured by the reflection that whatever measures are taken to raise the general standard of life can hardly fail to benefit the infant in the cradle and the aged patient in the Poor Law infirmary.

The State and the Nation's Health.

If these considerations have weight, it must be one of the paramount duties of the State to concern itself more and more intimately with the health of the nation. It can do that by its solicitude for those who are sick, and by taking whatever measures are possible to keep them from becoming sick. Its action, in a word, must be both curative and preventive. While the science of medicine was mainly empirical and the causes of disease were either unknown or wrongly attributed, preventive measures by the State were little thought of. To-day a long series of Public Health Acts and the still recent creation of a Ministry of Health attest the full recognition and acceptance by the State of this essential administrative function. The right of the State and of the public authority to invade this particular domain is no longer challenged. It is seen to be for the common good that the sanitary and the factory inspector are armed with the sanction of the public authority; and as the ameliorative possibilities, latent in preventive measures, are better understood, there will be a growing impatience with the obstacles placed in the way of their effective exercise by selfish or interested parties.

The establishment of the Ministry of Health bore witness, not to the sudden discovery of a new truth, but to the proved results of much admirable work which had been done in the previous half-century and to the need of its more resolute prosecution. We are now accustomed to the blessings of a pure water supply and efficient systems of drainage and sewerage; we have grown intolerant of the most offensive features of a slum; we have a clearly defined standard of, say, the minimum hygienic requirements of a new house. Throughout the wide field of industrial hygiene we know what conditions are desirable and what are dangerous to health. Our knowledge is fairly complete; the practical difficulties are connected with administration—how to deal with the borderline cases, and how to make the best use of the money at disposal, for improvements are always costly and public expenditure can only be met either out of rates or out of taxes.

Public opinion has to be educated continuously all the time. As a rule it proves amenable to tactful handling. For example, the compulsory notification of diseases is now extended far beyond its original scope to as many as twenty-two notifiable diseases, and will probably be extended much further within the near future. The agitation when the National Health Insurance Act was being passed is now remembered with a smile for the broken vows that were registered never to lick Mr. Lloyd George's new-fangled stamps. But even the greatest changes are very soon accepted as if they had always been, provided that on the whole the new institution functions well and promotes, in spite of whatever defects, the general well-being.

Preventive Legislation.

The scope of preventive legislation is almost limitless, and we are likely to see the State interfering—or shall I say intervening?—more and more in the interests of public health. For example, all the Licensing Acts of the last half-century are based in the last instance on the argument that stricter regulation is necessary for the general public health and safety, and it is obvious that that particular field of controversial legislation is by no means exhausted.

Moreover, the State is beginning to assert its regulative powers in departments of social and even of family life from which hitherto it has held aloof, and its justification will always be that the interests of public health override the personal interest of the individual, who, as a member of the community, does not and cannot act to himself alone. We may expect sharp controversy, for example, if and when the State concerns itself directly with eugenics, and asserts its solicitude for a generation not yet born, not by the provision of cradles and nurseries, but even by the very determination of parentage itself. This might have seemed fantastic a few years ago. But now that the idol of State socialism has been set up for our worship we may be sure that sooner or later the theorists will attempt to invest the Ministry of Health with increasingly autocratic powers, and will seek to transform the whole medical service of this country into a State service, with State hospitals, State examinations for degrees, and the State payment of doctors. This would be a perfectly logical development in a socialist State, nor can it be pretended that such a system could not be worked. But whether it would be as efficient as our present system, whether it would be as acceptable to the general body of the people, and whether the vastly increased cost would be repaid by equivalent advancement of medical knowledge or improvement in the public health, there is room for the very gravest doubts.

Doctor and Patient.

The patient's right to choose his medical adviser—which right is indispensable to the creation of a perfect relationship between them—has contributed largely to the smooth working of the National Health Insurance Act. There are roughly thirteen million insured persons and rather more

public press will devote more and more space to the manifold problems of public health, and it is obviously desirable that what is written should be written with authority. No anonymous article on a technical or professional subject carries the weight of the signed contribution, and if doctors write for the lay press, as they will be urged to do with an ever-increasing insistence, the opportunities of professional self-advertisement will greatly multiply.

Nevertheless, it is to the common interest of the profession and of the public that these temptations—not, indeed, to inform the public of what is for its good, but to inform it in such a way as to advertise and glorify the writer and conduce to his personal gain—shall be resisted, and that the Medical Council shall still continue to exercise its powerful restraints. In other countries a different practice may be followed, but till it is shown that their method is more conducive than ours, either to the dignity and character of the profession or to the protection of the public from the charlatan and the quack, these restraints should not be weakened. Many borderline cases are bound to occur as they do at present, but I assume that the Council will continue to act with that judicial discretion which has on several occasions received the acknowledgement of the highest legal authorities.

Unqualified Practitioners.

As for the unqualified practitioner, I say without hesitation that the Medical Council cannot and must not recognize him, and therefore cannot and must not abate its strong reprobation of covering. To do so would be to stultify itself and the *Register*, which is its special creation and instrument. It cannot, to borrow an expression from another profession, recognize any orders but its own. I do not mean that it should seek to induce the State, as is done in some countries, to make unqualified practice illegal. Even if that were desirable, the public would not permit it. Public opinion, if I may say so, has a sporting fancy for the outsider, and outsiders, even the rankest, do sometimes win. But, though rare and exceptional cases may arise, the Council cannot extend either the bow of friendship or the nod of recognition to any unqualified practitioner without placing itself in a false position. If an unqualified practitioner really discovers a new cure or treatment for one of the ills of humanity, his consulting room will not long remain empty of patients. If his method is genuine it will endure, and, soon or late, it will win general recognition. But no one can reasonably expect admission to the *Medical Register*—or to any appendix thereto—by any except the approved channel.

Admission is not a question of initiation and secret rite; it is a plain question whether the entrant has gone through certain courses of medical training and passed the presented examinations. How can either be abandoned with safety to the public interest? The unqualified practitioner may or may not have sufficient general medical knowledge to enable him to make a diagnosis. A few may have gone through some sort of a medical course; the majority have not. It takes the ordinary medical man five years or more to complete his course; the unqualified man often does not give as many months. He professes to be a specialist without even elementary grounding in the essential rudiments of medical knowledge. I say nothing against the science of osteopathy or these uses of the manipulative treatment. I only say that those who practise these arts should have the medical knowledge without which they may do their patients infinite harm.

The champions of the unqualified practitioner fall into two main classes. One consists of those good people, invincibly credulous and optimistic by nature, who chatter about cures and treatment as others chatter about politics, and on whose ears well-syllabled words like "osteopathy" and "manipulation" fall with a sweetly modulated cadence of solace and hope. The other class consists of the ingenious rebels against all authority but their own, the sophists of the day, who deride professional etiquette and grimace at professional tradition. Perhaps here and there certain solemn pomposities do linger even yet in our profession, and an occasional grin at these may do no harm; but the health of the public is no grinning matter. The plain truth remains that behind the rare—the very rare—unqualified practitioners of whose success so much is made, but whose failures pass unrecorded, there are scores of other practitioners of technique ancient and modern, Chaldean and transatlantic, who are eager to take advantage of any momentary opening of the door, which it is the declared policy of the General Medical Council to keep tightly shut.

A selfish, obscurantist policy would be totally contrary to the free spirit of inquiry which animates the medical science of to-day. But this is neither selfish nor obscurantist. Whatever in any modern technique is tested and proved good is sure of eventual adoption, and not even the gates of the General Medical Council will prevail against it. But the tests and the proofs must be such as are recognized by that universal medical science which talks a common language throughout the world and which alone can securely judge.

The public mind was perhaps never more impatient of authority than it is to-day. Unable to distinguish with certainty where the trained expert alone has any claim to be heard, multitudes of people are still prepared to accept offhand the morning and the evening stunt of their favourite newspapers, which are then forgotten as soon as read. So many romantic impossibilities of yesterday have become the casual scientific commonplaces of to-day that the very word "miracle" itself has shrunk back to its original connotation, and even the wisest have still no effective retort to Hamlet's gibe as to the inadequacy of their philosophy to embrace the content of heaven and earth. Nevertheless, Authority remains unshaken on her intellectual throne, though the gusts of change may a little disorder her raiment, and Authority herself acquires a riper wisdom and a larger experience with the passage of the years.

The medical profession is a living profession. It is for ever breaking new ground, mapping and charting as it goes, and the necessary correction of a too hasty observation or faulty induction, as well as the need to include new knowledge, requires us from time to time to revise our atlases. And though we may be fairly confident that the older continents are now accurately charted, there is always the need to be prepared for the crash of old-established notions and for restless movements of insurgence along boundaries which once appeared to have been fixed for all time.

It is a sobering reflection that, but for the violent wrench out of its true direction which medical science suffered two thousand years ago, some of our most recent discoveries might well have been among the oldest blessings to suffering humanity. With the abandonment of the one true scientific method of patient observation and careful induction there was also unhappily discarded that sagest of all the medical maxims of ancient Hellas, that the physician is the servant of Nature.

The human race has suffered sorely because medical art and science took so tragically wrong a turning, after making so brilliant a start. Probably the perversity of the patient was largely responsible. Popular demand has always been insistent for the bottle of medicine and the charm. Science, under the lead of Aristotle, had sought to exorcise the potion-monger and the thaumaturgist, but back they came with a rush, and when the ancient scientist candidly admitted that he was uncertain as to the nature or the cure of the complaint the patient soon betook himself to one who promised a safe, quick, and pleasant cure.

The great truth that the supernatural and the scientific do not run well in double harness needs, I believe, a resonant restatement to-day. The profession is often blamed for its instinctive repugnance to the introduction of the supernatural into the art of healing. This is attributed to that professional jealousy which is supposed to seize every doctor when an unregistered hand assumes the gold-headed cane which is the symbol of his craft. I do not know that there is more professional jealousy among doctors than there is among lawyers; I doubt if there is as much as among plumbers and bricklayers.

No professional body loves an outsider who usurps its own particular functions, and long experience has shown

must be ready to face a searching criticism of their accounts by business men whom, if they are wise, they will invite and welcome to their councils.

Changing Type of Hospital Patient.

Again, we must not shut our eyes to the rapidly changing character of the personnel of hospital patients. The hospital is no longer the lazar-house of the destitute, the place to which homeless and plague-stricken outcasts crawled to die, or into which they were herded if they seemed too noisome and dangerous to be tolerated at large. Such it was in mediaeval times; then came the period, which lasted more or less down to our own day, when the hospital was still exclusively used by such as were too poor to pay for the ministrations of a doctor. Some people still hold that this should be the fundamental function of any hospital which is supported by public subscriptions, and I agree that this primary purpose for which hospitals exist—namely, that of taking in and caring for the indigent poor—must in no way be shelved or neglected.

But we have advanced far beyond that simple conception in these days, and we shall advance much further still, if only because the hospitals, from being mere infirmaries, have become the centres of the best medical and surgical skill in the areas they serve. The best nursing, the latest scientific apparatus, all are concentrated there for the service of the poor, and while the rich and the well-to-do can look after themselves, there remain large intermediary classes of the population who are cut off from the best skill because, on the one hand, they cannot afford the fees, and, on the other, they are not of the class for which the hospitals were intended. If that were pressed it would indeed be intolerable, especially in view of the increasing expensiveness of any serious operation or illness, the cost of nursing homes, and the palpable unfairness of leaving out in the cold the great body of the middle classes, whose financial betterment has by no means kept pace with that of the superior artisan class, and who have been in the past, according to their means, good and loyal friends of the hospitals.

Wards for Paying Patients.

It is certain, therefore, in my opinion, that we shall see a steady extension of the principle of the paying ward, and even of the paying hospital, for the use of the patient who pays in accordance with his means. In many hospitals to-day all but the very poorest patients are expected to contribute to the cost of their healing, and there is little need to lament the disappearance of the old principle that the hospitals were absolutely free—a principle which, in fact, was often grossly abused.

The interests of the middle classes deserve attention no less than those of any other class. May we not, therefore, look forward to a time when every general hospital will be well equipped with paying wards, or will have a paying hospital in association with it, served by the same staff and the same nurses? A middle-class patient who is a suitable hospital case could be seen by the almoner of the hospital, and, after stating his income and position, terms could be arranged according to means. Naturally that will open up the question of fees for the surgeon or the physician, and some obvious and possibly difficult adjustments would have to be made; but no vital principle that I can see would be endangered by the payment of these special fees, or even by the hospital itself making a substantial profit on such cases which would help towards the maintenance of more beds in the non-paying wards. Such changes are likely to be gradual; we can carefully note what effect, if any, they have upon the flow of subscriptions. Personally, I do not think that the charitable donor is likely to object to a middle-class paying patient receiving a share of the fruits of his bounty. He had a much more valid grievance against those who abused the freedom of the hospital and never contributed a penny to its funds.

The medical profession is generous in accommodating its fees according to the patient's income. But every medical man knows cases where the serious illness of the bread-winner or the wife or child has exhausted the savings of a middle-class home or crippled it with a load of debt. The middle-class patient, moreover, is the principal sufferer from the high fees of the nursing home, another institution which has a necessary place in our existing system for dealing with the cure of disease, but which is by no means immune from well justified criticism. Is it, indeed, too much to say that the extreme expensiveness of nursing homes—I speak, of course, in purely general terms—is contributing as much as anything else to the extension of the system of paying wards in hospitals and the call for its rapid development?

Working-Class Contributions to Hospitals.

There is also another important development in process with regard to the hospitals. More and more in the large cities and industrial areas the hospitals are coming to rely upon the subscriptions of the working classes, contributed through a general Hospital Sunday collection or through a direct trade union levy. In this district, for example, the Hospital Saturday Committee are very good friends of the hospitals, contributing willingly, cheerfully, and without condition or stipulation as to the hospital service for their members they will receive in return. This trust is not misplaced. They lose nothing by not dealing in terms of contract and demanding the strict recognition of a right.

Many county hospitals are stimulating interest in their work by forming a collecting committee in every village and persuading the cottagers to subscribe to its funds, almost in the same way that they subscribe to a sick or benefit club. This will necessarily lead to a great extension of the hospitals, for those who pay will expect to receive hospital treatment as *a right* in case of serious illness. When the small contributor begins to talk about "our hospital," the vitalizing spirit of voluntaryism is at work. Open the door to State direction and control and the cold east wind of officialism will contrive an entrance too.

THE GENERAL MEDICAL COUNCIL.

Another aspect of the relationship of the medical profession to the public has been much discussed of late in connexion with certain punitive action taken by the General Medical Council. This discussion has removed many misconceptions as to the specific purposes for which the Council was created by the Legislature—not, as was too often supposed, to serve as the executive of a powerful professional organization protecting the interests of its members, but as a body entrusted with powers, clearly defined first by Parliament and later by the judges, for the protection of the public against the incompetence and the imposture of unqualified medical practitioners. Practically the only criticism directed against the Council arises from the fidelity with which, in these days of growing laxity, it has maintained its jealous regard for the purity of its register of membership. There are really two main questions in which the lay public is interested. The first is: Is it or is it not to the public advantage that the General Medical Council should set its face like flint against professional self-advertisement? The second is: Is it or is it not to the public advantage that the Council should show a less uncompromising attitude towards the unqualified practitioner and a greater leniency towards those who transgress its stringent rule against covering?

The rule against professional self-advertisement is unquestionably in the public interest. The publicity agents of the commercial world may sound their slogan as they will about "Truth in advertising." But, as Dr. Johnson once shrewdly observed, the secret of advertising is "large promise"; and large, limitless, boundless promise is wholly out of place in the practice of the medical art. Inseparable from quackery, it is the sign manual of the unqualified nostrum-monger. In my view, this most salutary rule against professional self-advertisement needs to be observed more than ever now that the old reticences are being broken down in so many directions, and in view of the growing disposition to discuss all medical subjects freely in the public press.

Whether we like it or not, that school of thought is prevailing which holds that the open forum is the best of all popular educators, that ignorance is the greatest of all dangers, and that publicity alone can create the new public opinion out of which it is hoped there may issue a higher moral sense and a stronger self-control. The

The Maudsley Lecture
ON
THE PREVENTION OF INSANITY.*

BY
PROFESSOR GEORGE M. ROBERTSON,
PRESIDENT OF THE ROYAL COLLEGE OF PHYSICIANS, EDINBURGH.

(ABSTRACT.)

PROFESSOR ROBERTSON divided his subject into two parts: first, the influences which go to the causation of insanity; secondly, observations on the theories and methods of prevention, particularly of general paralysis of the insane. The statistics he used were taken from the twenty-first annual report of the Commission in Lunacy of the State of New York for the year 1908-09.

Conditions and Influences Affecting the Occurrence of Insanity.

From these statistics it appeared that insanity under the age of 15 was quite negligible and if included in statistics of insanity had a most disturbing effect, as this period of life comprised nearly a third of the population. A high birth rate and a low infantile mortality would increase the population at this period, and the effect of this proportionate increase would be to reduce the apparent amount of insanity in the total population, without any real diminution of insanity. A fair number of admissions occurred between 15 and 19, and a larger number between 20 and 24. The amount continued very high up to 40 years of age, after which it fell, so that it appeared that the early years of life were the most liable to insanity, and with increasing years a mental breakdown became every year more remote. But these statistics did not represent the rate of incidence of the liability to insanity—that is to say, the frequency with which insanity occurred in proportion to the number living. The large number of admissions recorded between 20 and 40 was mainly due to the large number of persons living in early life, and the small number of admissions at 75 resulted from the small number alive in old age. Statistics of incidence showed that insanity tended to develop between 15 and 19, but became much more pronounced between 20 and 24. This was followed by a steady rise year after year till the age of 50 was reached. There was then a short period of decline, after which there was an extremely rapid rise in old age. There was a general tendency for insanity to become more frequent as one grew older. To emphasize the difference between the number of admissions at the various age periods and the rate of incidence of insanity at these periods Professor Robertson brought the two charts together for the purpose of comparison.

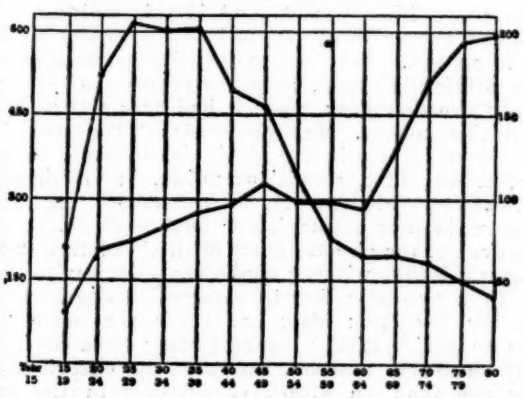

FIG. 1.—Graph of total number of first admissions (5,222) compared with rate of incidence of insanity per 100,000 of the population at quinquennial age periods (ratio 3 to 1).

Incidence of Insanity among Males and Females.

As regards sex, insanity occurred among males at a proportionately higher rate than among females. This unexpected result was mainly due to the greater number of admissions from general paralysis and alcoholic insanity. Among the married the incidence of insanity was decidedly low. It was slightly higher among women under 35 than among men, and this was no doubt connected with the risks of child-bearing. The loss of a husband or a wife increased in a marked manner the incidence of insanity. Up to the age of 55 the prevalence of insanity among widows and widowers was almost double that among married men and women. The symptoms of insanity in these people were to a large extent a wrong method of adjustment to difficulties in life, and the increased amount of insanity among widows and widowers was both a sociological and a biological phenomenon. Between the ages of 25 and 55 the prevalence of insanity among single men and women was nearly three times as great as among a similar number of married men and women of the same age. The causes of this high prevalence among the single were involved; but the average health of the single was probably lower than that of the married, for ill health might be itself a reason for remaining single. Professor Robertson concluded, from the low incidence of insanity among the married, that the condition of marriage and of family life, in spite of its greater responsibilities, perhaps on account of them, was the most favourable mode of existence for men and women. Young men between 25 and 35 years of age continuing bachelors died on the average four years sooner than married men, and ran three times the risk of becoming insane.

The Three Critical Periods of Life.

Coming to the three critical periods of life, all connected in some measure with the function of sex, Professor Robertson remarked that during pubescence and adolescence the balance of the internal secretions of the body was disturbed by the intrusion of the internal secretion from the sexual glands. For all practical purposes insanity occurred for the first time at this period of life. Leaving on one side the effect of heredity, there was in insanity almost always a physical cause, but usually combined with mental causes. The physical cause in adolescent insanity was the physiological disturbance produced by the internal secretions. The mental cause was the change in the social status of the young adult or adolescent. He had to adjust himself to the problems of life, and of these the most disturbing during these early years were those connected with sex.

The next critical period was the climacteric, occurring between 45 and 50. This was the age when the powers first began to fail; an age when to keep abreast of younger competitors increased effort was needed. When the climacteric had been surmounted, the incidence of insanity for a period fell steadily. This period, accompanied by a damping down of the fires of emotion, was one of the most valuable. The mind had become stabilized. Wisdom had increased with experience of life. Men of this age guided the destinies of mankind. The third crisis, said Professor Robertson, was known as the grand climacteric, when the period of senescence began. After the age of 64 the rate of incidence of insanity mounted year by year with extreme rapidity, and was proportionately almost double that of the period of adolescence. Above 75 it was almost treble. The incidence was more marked even than was recognized, since many senile persons were cared for at home and were never registered as insane. The crisis of the grand climacteric supported the regulation of the Civil Service that 64 was the age for retirement.

Hereditary, Acquired, and Senile Insanity.

Professor Robertson then divided insanity into three distinctive types—the hereditary, the acquired, and the decadent, associated with three age periods—early adult life, middle age, and senescence, although not limited to them.

He said that the number of admissions of dementia praecox was large, that it was malignant in character, that only 15 per cent. of those afflicted with it recovered, so that the majority of the patients became permanent residents and filled mental hospitals. This gave the impression that the early period of life was the most liable to insanity, whereas adolescence was actually the least dangerous period of life for insanity in general. If, however, we refer to the hereditary insanities alone, and

*Delivered before the Royal Medico-Psychological Association on July 15th.

that the unqualified practitioner of medicine is in double measure an unqualified danger to the public. And yet how clients troop to his door or rain in upon him a shower of post-office orders if he is a shrewd exploiter at once of the foibles and the earnest longings of mankind. So it has ever been; so it will ever be. As the cynic long ago said: "If the public want to be deceived, let them." But the obvious fact is that the public want not to be deceived but to be cured, and that is why, if an authorized prescription in our cryptic Latin fails to bring relief, they will cheerfully take a free medical tip in plain English from their Sunday paper's answers to correspondents, or accept as gospel the large promise of displayed advertisement; or if they are of a more serious and contemplative type, they will haunt the temples of those who say that they possess the secret of permanent good health.

The Religious Healer.

With respect to the religious and quasi-religious healer, the medical profession is in a difficult position. It is precluded by the memory of its own empirical past from adorning its robes with the fragile fringes of infallibility. Dedicated to Science and conscious of boundless horizons still beyond its ken, whatever face the profession may present to the outer world, it must display in the intimate presence of Truth the modesty of the neophyte. Nor can it refuse to acknowledge the sincerity of other searchers after truth travelling upon roads other than that on which its own feet are set. Nevertheless, the profession owes to itself and to the public the duty of speaking out.

There is no difficulty, of course, in dealing with the vulgar quack who sells a bottled panacea to the joint benefit of himself and the Inland Revenue, and who leaves the deluded purchaser, if he be lucky, much the same as he was before. But obvious difficulty arises when a new theory and practice of the art of healing is proclaimed and health is taught in terms of religion, and religion in terms of health. In that company the medical scientist has no place. His facts are not theirs. Their terminology is not his. There is no meeting ground in common. He knows what he understands by science; he does not know what they mean. Even if he were willing to join the new cult, its complete refusal to recognize the need of a medical art, such as that which he practises, must effectually keep the door of communication closed. Science has long since framed her own laws of method and proof which are recognized throughout the world, and the medical profession can have no commerce with any newly organized cult which denies the very bases on which these laws are founded.

But this is not to say that no friendly co-operation is possible between doctors and those who are earnestly studying the healing power of the mind. Let there be no contention about names; when we speak of mind or soul, let us freely admit that we cannot take a specimen of either on a slide and put it under a microscope. That there is a certain healing power, a true *vis medicatrix*, in religion as in nature, few careful observers would, I think, deny. Between religion and nature, between mind and body, there exists not an opposition but a relation. Every medical man of experience must have known cases in which his own scientific skill has seemed to be helped, sometimes most strangely and wonderfully, by some serenity of mind in the patient, some quiet confidence in the ultimate issue, some realization of sure dependence upon a higher power, some tranquillizing influence of the soul upon the physical stress and tumult of the senses—beneficent, soothing, healing activities in which he and his art have had little or no share.

These facts are not reducible to formulae. Science cannot explain them as she can explain the operation of an anodyne stealing along the passage ways of sense. We do not, indeed, know very much about that mysterious parallel road, which always lies in deep shadow, where the mind or the soul, reacting to a spirit which seems to come from without, influences profoundly in its turn the body which the doctor is trying to heal. There is no place in respect of this region for dogmatic utterance; but there is always room for patient and reverent inquiry. The whole of our profession will await with impartial mind the result of the labours of the joint committee which was appointed some months ago to investigate the phenomena of what is generally called spiritual healing.

Meanwhile, I say with confidence that any systematized creed which professes to dispense with the art of medicine and surgery is false to the Divine. But if any possess the precious gift of ministering to the mind diseased or of imparting to those who walk in the shadow of the valley the courage to move serenely among the phantoms and terrors which haunt that road, let us be sure that so divine a gift can only emanate from a divine source, and let us welcome the help of any unseen wings that stir the air with healing.

In such moments the old tradition is confirmed that the doctor stands in a different relation to his fellow from most other professional men. I do not claim that the doctor consciously lives, like the priest, what is called a dedicated life—though I have known men to whom that noble phrase might well be applied—but there is a special nexus between doctor and patient which is independent of, as it is unpurchased by, the fee which passes between them. The public expect much of the doctor and take much for granted. I like that old story of the woman of Selkirk who, observing her doctor ride by, said to the neighbour with whom she was gossiping, "Aye, there goes the doctor—honest man! He's brought all my ten bairns into the world and never got a rap for one of them."

The national health insurance scheme has at any rate checked the more unconscionable draughts which once used to be made upon the deep well of medical disinterestedness, but the profession still gives much for which it receives no direct return but gratitude, and sometimes even that is left unspoken. That, however, is the penalty of altruism and an established reputation for kindness of heart, and that is partly why the doctor holds his place in the public esteem, despite the satirists, the playwrights, and the novelists who still delight to poke their fun—on the whole not unfriendly—at his etiquette, his bedside manner, his scraps of weird Latinity, and the artifice with which the wild surmise of an impossible diagnosis may still be masked under the grave, slow smile of apparently assumed certainty.

THE REAL DOCTOR.

But if we want the portrait of the real doctor we go, not to books, but to life. We expect him, not in vain, to combine with knowledge the understanding that springs from intuition till it is most richly reinforced by experience, to bear a tranquillizing influence, and to radiate confidence and hope. We expect him to exemplify, like the surgeon of whom Henley wrote:

> "Faultless patience and unyielding will,
> Beautiful gentleness and splendid skill,"

caring always for life as a thing most precious, quick—and now happily well able—to spare the sufferer one unnecessary pang, the restorer of health, a strong sure help in the more supreme moments:

> "In many a house of care, when pain has forced a footing there,
> And ther's a Darkness on the stair will not be turned away."

Such is the doctor, the family doctor, who is more to the public at large than the most learned and the most wise who dwell in those two long, unlovely, parallel streets of London, where the waters of healing are laid on at the main. He is still the same, even though he is called upon in these days to enter the service—the preventive service—of the Ministry of Health, disarming disease before it strikes, saving the firstborn, not by a smear of blood on the lintel, but by a dash of disinfectant in the drain, and sometimes purchasing the immunity of millions as cheaply as the restoration of a few convalescents to health. The doctor's professional qualifications may change as medical science advances; the qualifications he needs to win him the confidence of his fellows are unchangeable as human nature itself. That confidence it is the policy of this great Association and the desire of every one of its members always to deserve and for ever to retain.

popular mind, but in itself consanguinity did no harm, provided the stock was good. As for the question of sterilization, Professor Robertson was not convinced by the theoretical arguments in its favour. He believed the bulk of the medical profession regarded the proposal as such an outrage on their traditional ideals of duty towards their patients that its adoption was impracticable in this country. He could not imagine a board of physicians calmly sentencing a victim to this cold-blooded and superfluous insult. Enthusiasm had overstepped the bounds of reason when a writer declared that "if sterilization should be permanently prohibited, it will be impossible to prevent a slow but steady deterioration of all such civilized races as are so strongly endowed with human sentiments as to prevent infanticide from becoming a permissible practice."

In support of his views on this subject and to show how little the extent of mental disease was appreciated, Professor Robertson quoted an inquiry by Sir Thomas Clouston, who found that in three generations in 41 of 83 families with which he was acquainted in a country parish in Scotland one or other of four diseases had occurred—namely, mental disease, congenital imbecility, idiocy, or epilepsy. Sir Thomas Clouston had no doubt that if his information had been quite perfect, a few more families would have been found to have produced those diseases. The lesson of this study in heredity showed how much room there was for the practice of mental hygiene, of moral control, of abstinence from deteriorating agents, of cultivating good health, and of arranging marriages on right principles, to counteract, and in time perhaps to eradicate, those morbid nervous and mental tendencies.

Mental Hygiene of Childhood and Adolescence.

To eradicate "morbid nervous and mental tendencies," Professor Robertson continued, is the avowed aim of eugenics, and stripped of excrescences eugenics might one day help to lay the foundations of a healthier and a more efficient race. That goal achieved, it must still be remembered that the task of producing healthy-minded men and women does not end. Every human being is a living and developing organism, bound by his nature to react to the influences of his environment, especially so if they were brought to bear on him during the most plastic phase of life. Even the defective child showed the influence of discerning management and an environment adapted to its responsive capacity, a consideration which went far to justify the large expenditure of public funds in the provision of special institutions and schools for this class. But the advantages so laboriously acquired were squandered by making indifferent provision for lifelong care, and the rectification of this failure was one of the necessities of our time. There was also need for the earliest possible recognition of mental defect, and for a closer study of the ante-natal as distinguished from the hereditary conditions of defect.

In Professor Robertson's opinion the mind of man was not born—it was made. At the outset all those forces which left their imprint on the child were combined in the personality of the mother, and practical hygienic measures must be concentrated on her rather than on the child. The subsequent development of the child involved the transition from the state of dependence to comparative freedom. The social instincts had to be developed through contact with the other members of the family, and later with the community at large. Home influences had subsequently to be tempered by the discipline of school life. Through such experiences the primitive, self-seeking tendencies were subordinated to the higher self, and their latent energy set free for the achievement of social ends. The danger inherent in this long travail was lest in the end the primary instinctive tendencies should triumph over the educative influences. Out of the failure to master the temptations was born the type of temperament in which the seeds of dementia praecox and other forms of mental disorder found a congenial soil. Without doubt, the mental hygiene of childhood and of adolescence played a most important part in the prevention of insanity.

Professor Robertson applied the term "prophylaxis" to particular steps taken with the immediate object of protecting the mind when threatened by danger. It was essential, for example, to those with a known hereditary predisposition who had already suffered from an attack, and especially to those in whom the attack had been of a recurrent type, such as manic-depressive insanity. When such a case occurred it should be borne in mind that the other members of the family inherited a similar predisposition. The warning indications were, first, loss of sleep. Extreme or prolonged insomnia was a danger, and precautions should be taken. Secondly, there was prolonged anxiety that could not be dislodged. Another danger signal was mental and physical exhaustion. A change of character, not amounting to actual insanity, was another important sign, particularly in those who were subject to manic-depressive insanity. Sometimes the patient was morbidly elated, at others he was morbidly depressed. These changes of mood could be controlled only to a limited extent, but much could be done to prevent their exaggeration into something definitely morbid.

Early Treatment.

It was believed by many that some of the cases receiving treatment for the prevention of insanity would not develop insanity were they to receive none. Such authorities believed that these cases of the psycho-neuroses, which others regarded as exhibiting the early stage of insanity, suffered really from a definite type of mental disorder of a different kind. It was even alleged by them that the presence of a psycho-neurosis was a protection against insanity. Professor Robertson was inclined to agree that once a psycho-neurosis had assumed a definite form, although it varied from time to time in its severity and in the details of its symptomatology, it did not tend to alter its character, or to assume that of insanity, any more than one definite form of fully developed insanity tended to alter into another. To this extent the treatment of the psycho-neuroses was not the early treatment of insanity, nor could such treatment claim to prevent insanity from developing where that danger did not exist. To this extent also the existence of a definite type of psycho-neurosis, except in rare instances, might be said to protect the individual from the occurrence of actual insanity. But at an early stage it was impossible to foretell whether transient, vague, and disorderly mental phenomena would develop into a typical psycho-neurosis or into a definite form of insanity. There were two stages—an initial stage when anything was possible, and a later stage when the type was fixed.

Prevention of the Acquired Insanities.

In the middle period of life the benefits of prevention were more noticeable because they were more immediate. Insanity at this period was largely acquired, and could often be prevented. Myxoedematous insanity, for example, had diminished almost to the vanishing point since the discovery of its cause was made. Just as heredity was a factor to be reckoned with to a greater or less extent in every case of insanity, so we were beginning to recognize that disturbance of the internal secretions played a more or less important part in all forms of mental disorder. Any future great therapeutic discovery in the domain of mental disease would probably be found in a knowledge and control of the internal secretions.

Professor Robertson then said that as regards the prevention or abolition of alcoholic insanity there is a very simple way of effecting this, provided it is voluntary. But even if alcohol were prohibited, not in the legal but in the real sense, the total number of cases of insanity would not be diminished by the full number of cases diagnosed as alcoholic insanity. Many of these, owing to inherent instability, would break down from other causes in the absence of alcohol. On the other hand, alcohol is a contributing factor but not the principal cause of insanity in many other cases, and in these abstinence might be the means of averting insanity altogether. Alcoholic insanity is diminishing, though not so rapidly as most people desire. The habit of drinking is on the decline, and it is no small boon that drunkenness is on the decrease and in some places has entirely disappeared.

The other important form of acquired insanity is general paralysis. An astounding fall in the number of deaths was

especially if we restrict our attention to the most malignant type of insanity, dementia praecox, then adolescence is undoubtedly a dangerous period of life. As the individual grew older the danger of a breakdown from dementia praecox grew less. Between 40 and 45 it was exactly half of what it was between 20 and 25.

Manic-depressive insanity, the other important form of hereditary insanity, was not so prevalent in early adult life as dementia praecox, but its hereditary character was displayed by its tendency to recur. It was the benign type of hereditary insanity, and the vast majority of patients suffering from it, who were in good bodily health, made excellent recoveries. Manic-depressive insanity, being a disorder of the emotions, was more frequent among females than among males. The disease in males might be wrongly diagnosed as alcoholic insanity because the patients had taken to drink. In the elated phase of the disorder the patient drank because of his high spirits, and in the depressive phase in order to drown his sorrow.

The two most important forms of insanity in middle life were alcoholic insanity and general paralysis of the insane, and both occurred more frequently in men than in women. Both of them were acquired forms of insanity, and therefore preventable. The diagnosis of alcoholic insanity was uncertain, and depended largely on the personal equation of the observer. The part played by heredity created uncertainty in every case. To suffer from alcoholic insanity one must first be alcoholizable by hereditary predisposition. Alcohol, according to Féré, was the "touchstone of mental equilibrium," and to be able to resist the toxic effects of alcohol betokened a well controlled mind and a sound brain. Mercier had pointed out that there were always two factors in the production of insanity—an internal and an external. The internal factor represented the hereditary tendency; the external, some exciting cause in the environment. These factors were always inversely proportional. If the internal factor or hereditary tendency to insanity was strong, then the external or alcoholic factor was weak; but if the hereditary predisposition to insanity was slight, then the exciting cause must be strong. The graph of alcoholic insanity in

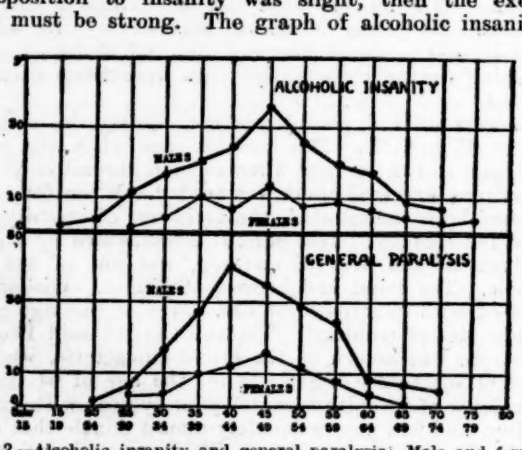

FIG. 2.—Alcoholic insanity and general paralysis. Male and female admissions separately per 100,000 of the population.

males was as perfect as the outline of Fujiyama. The sharp apex of the cone seemed to indicate that there was in the male a climacteric which corresponded to the female menopause.

The incidence of general paralysis of the insane in both sexes resembled that of alcoholic insanity. It reached its period of maximum incidence five years earlier than was the case with alcoholic insanity. Its onset was probably determined by the date of infection by syphilis. We are now in possession of two promising forms of treatment—namely, benign tertian malaria and tryparsamide. In early cases after malarial treatment about a third of the patients were able to return to work, and another third were distinctly improved. Apparent recoveries had also been effected by tryparsamide alone, which was by far the most potent arsenical preparation for the treatment of this disease.

The mental decay of old age would come, said Professor Robertson, to every human being if he lived long enough; but no physiological process showed more extreme variations than the time of onset of senectitude. Senile insanity was closely related to the waning of the bodily functions and to those diseases to which the aged are liable. Dr. John Carswell had made some interesting observations on the relation between the death rate and the occurrence of insanity. He selected ten wards in the city of Glasgow with a combined population of nearly 400,000, and divided them into two practically equal groups, the one with a death rate below, and the other with a death rate above, that of the whole city, called for convenience the healthy and the unhealthy groups. He also subdivided each group into two sections, the one consisting of persons between 15 and 44, and the other of those above 45 years of age—in other words, a younger and an older section. Dealing first with the younger sections, and making use of first attacks only, Dr. Carswell found that in three years there were 165 cases of insanity in the healthy group and 186 in the unhealthy group. This difference was slight, so he concluded that health of body was probably not the main factor in the production of insanity in the early period of life; 67 per cent. of the cases were due to constitutional or hereditary influences. Dealing next with the older sections he found in the unhealthy group 149 cases of insanity, as compared with only 91 in the healthy group—an increase of 61 per cent. He therefore concluded that ill health of body was an important factor in the production of insanity, being less in a district in which comfort was enjoyed and the death rate was low. Improved social conditions did not apparently lead to any marked diminution in the amount of insanity during early adult life, as the forms of insanity were then mainly hereditary. They apparently reduced the amount of senile insanity.

The preventive aspect of his survey, said Professor Robertson, fell naturally into a consideration of the measures to be taken to deal with the three types of insanity—the hereditary, the acquired, and the senile.

Prevention of the Hereditary Insanities: Eugenics.

It was sometimes alleged, on the original authority of Morel, that when insanity made its appearance in a stock it arose at an earlier age and in a more severe form in every subsequent generation, so that in the third or fourth generation it was represented by imbecility and idiocy, and the stock came to an end. This progressive degeneration was described by Sir Thomas Clouston as Nature's method of killing off a bad stock. There were errors as well as false suggestions in these statements. When insanity first made its appearance in a stock there was no necessity for it to continue, far less to arise in an earlier and more severe form in each successive generation. If bad stock married into bad, the offspring was naturally less fit than either parent, and if this policy were continued for two or three generations the family ultimately came to an end. But, just as insanity might appear in a family previously sound, owing to unfortunate mating, so it might also disappear, when it had once occurred, owing to propitious unions. Maudsley wrote: "The two principal modes by which an insane strain in a family is worked out of it are, first, propitious unions in marriage, with sound stocks, whereby it is attenuated, neutralized, perhaps ultimately extinguished; and, secondly, propitious dispositions of the circumstances of life." Of these methods he remarked that without doubt the first was most effective. In a process allied to progressive degeneration to which Sir Frederick Mott had given the name "antedating or anticipation," an hereditary form of insanity, usually dementia praecox, appeared in offspring at an earlier age than an attack of insanity in the parent. These precocious attacks of malignant insanity Professor Robertson believed to be the result of unpropitious unions. They indicated that the hereditary tendency in the offspring was greater than it was in either parent. It was clearly a social duty on the part of those inheriting a neuropathic strain to avoid marriage into stocks with a similar weakness, if offspring were expected. In the case of those with obvious mental defect or subject to a severe psychosis, marriage should not be contemplated. Belief in the evil effects of the marriage of cousins had sunk deep into the

Conclusion.

In conclusion, said Professor Robertson, it must be apparent to everyone that the problem of preventing mental disorder is not a simple one. The analogous problem is that of the prevention of tuberculosis, with which it has so many points in common, and from the campaign for its prevention much can be learned. The possible causes of mental derangement are legion, and the possible combination of these, in individual cases, beyond counting. It is clear that when sickness of mind threatens or occurs, mental health cannot be regained by any royal road. The claims of the individual sufferer are in the first place paramount and must be studied. Every case of threatened breakdown presents a unique problem. It may have features in common with others; it certainly will present features peculiar to itself. Intensive study, therefore, of individual cases, so as to disclose these causative factors, is the primary duty of the psychiatrist. If that duty be not discharged, treatment will be confined to a few rule-of-thumb precepts, and its results will be disappointing. Secondly, what can be done in a more general way is well illustrated in the case of general paralysis. By disseminating, as widely as possible, information as to its mode of attack and the methods of prevention, a real contribution has been made to the mental hygiene of the community. Encouraged by that success, let us see to it that our knowledge of the origin and development of other disabling conditions is effectively applied wherever it is needed. In the opening up of these preventive channels a great responsibility rests on practising psychiatrists. It is futile to lament that those of unstable equilibrium turn elsewhere for help—to the quack, to the charlatan, to the barren ritual of the latest cult. The blame for this state of affairs must be shared by the psychiatrist. Far too long has he sulked in his cave; now he must come out into the market-place and offer his wares to all who need them. He must not confine his interests to his duties in the mental hospital. He must co-operate with the general practitioner and get into touch with the outer world through the agency of out-patient clinics. An expert body of psychiatrists, trained in every device of medicine and psychology, and diligently applying themselves to the clamant needs of their generation, might avert much needless suffering on the part of those in mental difficulties or about to be overwhelmed. Let none be daunted by the magnitude of the enterprise that is envisaged, but rather find in it an incentive to continued and combined effort, and the hope of a greater reward.

DARK-GROUND ILLUMINATION OF TISSUE CELLS CULTIVATED "IN VITRO."*

BY

T. S. P. STRANGEWAYS, M.A., M.R.C.S., L.R.C.P.,
LECTURER IN SPECIAL PATHOLOGY, CAMBRIDGE UNIVERSITY;
DIRECTOR, CAMBRIDGE RESEARCH HOSPITAL.

AND

R. G. CANTI, M.D.,
LECTURER IN BACTERIOLOGY, ST. BARTHOLOMEW'S HOSPITAL, LONDON.
(From the Laboratories of the Research Hospital, Cambridge.)

THE cultivation of animal tissues *in vitro* is now a recognized method of research. When a fragment of tissue is cultivated upon a cover-slip in suitable medium a zone of cells grows out around the edge of the fragment. Many of these cells become adherent to the surface of the cover-slip and wander over it by amœboid movement, pushing their way along the plane between the glass and plasma jelly. Such cells are very suitable for microscopical observation, and studies of the cells carried out under direct illumination have already been reported.[1] The thin film of growing cells is peculiarly suitable for observation by dark-ground illumination, and by this method beautiful and instructive pictures of the living vegetative cells can be obtained. The technique for this examination requires considerable experience and care, but presents no great difficulty to workers familiar with critical microscopic technique.

*A demonstration given to the Section of Pathology and Bacteriology of the Annual Meeting at Nottingham on Friday, July 23rd, 1926.

The following description of the apparatus and methods used for the examination and study of tissue cells by dark-ground illumination may be useful to workers not familiar with this method of microscopic examination.

The cultures must be put up on thin glass slides not more than 0.6 mm. in thickness, and the thickness of the whole preparation must not exceed 0.9 mm.

The tissue may be cultivated in plasma or in plasma and embryo extract on a cover-slip sealed over a hollow-ground slide, and just before examination the cover-slip can be removed and transferred to a thin glass slide on which a drop of Tyrode or other suitable saline solution has been placed; the cover-slip is then sealed down with paraffin wax to prevent evaporation.

A better method, however, is to cultivate the tissues directly on the thin glass slide. By this means it is possible to use cultures growing in fluid as well as semi-solid media. Care must be taken not to press upon the cover-slip while handling the cultures as pressure may damage the growing cells. Too violent excursions of the oil-immersion objective will also cause damage.

The microscope we have used is a Zeiss microphotographic stand with mechanical stage and sliding objective carriers. Before any attempt is made to use the dark-ground condenser the objectives must be carefully centred. A triple nosepiece is to be avoided, as the three portions are seldom in exact optical centre and cannot be adjusted. The sliding carriers, on the other hand, are readily adjusted, and with a little experience give no more trouble than a triple nosepiece. Each objective must be centred and kept on its own carrier.

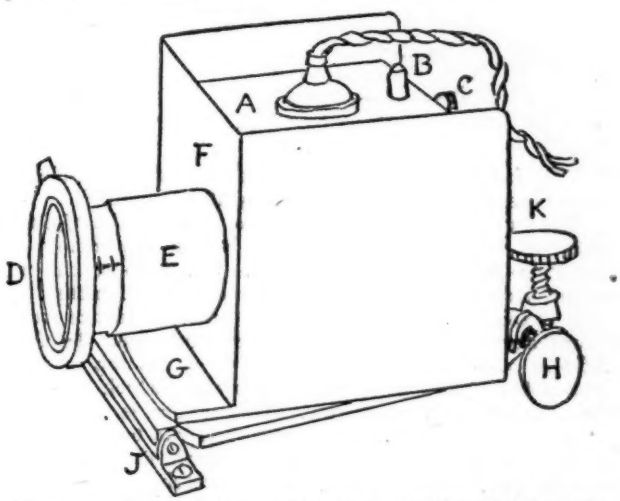

FIG. 1.—Diagrammatic drawing of lantern. A, Metal shield bent at right angles holding a pointolite lamp; the whole slides on B, a steel rod to which it is fixed with a thumbscrew C. This arrangement allows the lamp to be moved as required for centring with the lens D. The lens carrier slides in a sleeve, E, fixed to the front of the body of the box F. The top and back of the box are open and the bottom is made of a cast brass plate, G, to which is fixed the steel rod which carries the lamp-holder. This plate is pivoted at its centre and rides on a similar cast brass plate, movement laterally being obtained by the thumbscrew H. The lower plate is in turn pivoted at its forward end to a bar, J, fixed to the table, so that the whole lantern can be tilted up or down by the thumbscrew K.

The following instructions for centring the objective may be useful to those not accustomed to critical work.

1. Swing out the lower substage diaphragm, and the Abbé condenser, leaving the upper substage diaphragm in position; close this as far as possible.
2. Place the 2/3 inch objective with its sliding carrier in position and, using diffuse light, focus on to the aperture of the diaphragm.
3. Centre the 2/3 inch objective to the aperture of the diaphragm, using the key.
4. Replace the Abbé condenser, and place a centring slide on the microscope stage.
5. Focus on to the cross-line of the centring slide with the 2/3 inch objective and place the cross-line exactly in the centre of the field.
6. Remove the 2/3 inch objective and replace by the 1/8 inch, and later by the 1/12 inch, each on its own carrier. Using the key, centre these lenses to the cross-line.

All the lenses are now centred to the aperture of the upper substage diaphragm and hence to each other.

recorded in 1919, and this has continued, and is of supreme interest from the point of view of prevention. From 1907 to 1918 inclusive the number of male deaths was steady, and for eight years the biennial numbers did not vary more than 10. In 1919-20 there was a sudden drop of 26 per cent. The following appears to be the probable explanation of this sudden fall in the number of deaths. General paralysis may appear within three years after syphilis has been contracted, but it is not till seven years have elapsed that it occurs with any frequency. Of those attacked more than a half die within two years after the first appearance of the symptoms, which are usually present for a year before the patient is admitted to a mental hospital. If, therefore, persons develop general paralysis seven years after infection, and if a half die within two years, we require to go back nine years to find an explanation for any variation in the death rate. In other words, to explain a sudden fall in the number of deaths in 1919 we require to investigate conditions in 1910. If this be done an explanation is found in the employment during that year of salvarsan and the cure by its use of those males who contracted syphilis. As the fall in the number of deaths in 1919-20 is 26 per cent., it is certain that many who had contracted syphilis previous to 1910 and 1911 also took advantage of the discovery of the new remedy.

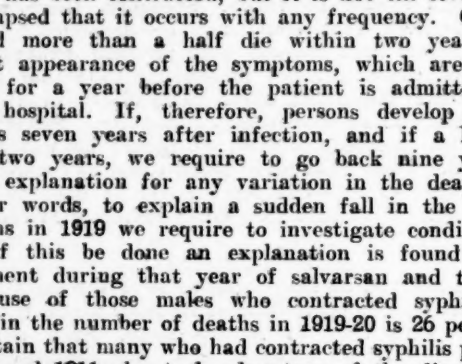

FIG. 3.—Numbers of deaths from general paralysis in England and Wales in biennial periods from 1907 to 1924, males and females separately. Graph of females four times enlarged as compared with graph of males.

The above chart has been designed from the number given to illustrate the deaths in biennial periods, and as the proportion of deaths of males to females is about 4 to 1 the graph for females has been enlarged four times to make its variations comparable. The graph for females is remarkable. There is a steady fall from 1907 to 1918, which amounted in that year to 28 per cent. Great as this reduction is, it cannot be attributed to the treatment women received, as comparatively little was done for them till venereal clinics were established in 1920. The explanation of this fall is believed to be as follows: Syphilis is infectious, and in dealing with infectious diseases the treatment of the individual case is of less importance than the prevention of the spread of infection. During the first decade of the century treatment by mercurial inunction was employed, and this form of treatment was a long one.* The opportunity was taken of instructing male patients regarding the nature of the disease they were suffering from and of appealing to them to avoid infecting others. Many men, it would seem, acted on this advice, but the result was strangely one-sided. In other infectious diseases, when precautions against infection are taken, benefit is received by all alike. Syphilis, however, is peculiar, as it spreads from one sex to the other, and if one sex only adopts measures to avoid spreading infection the whole benefit of these precautions is received by persons of the opposite sex alone. It is thus that we account for the continuous fall of female deaths from general paralysis from 1907 to 1918, while the deaths of males remained stationary, or even tended to rise. There was a further fall of 33 per cent. in the number of female deaths from general paralysis in 1919-20, as compared with the two previous years. This corresponds exactly with the fall in the deaths of males in time and proportion, but it was not directly due to treatment by salvarsan as was the case with males. It may, however, be traced to the employment of a rapid method of curing syphilis, with the result that the infectious stage of the disease in males was cut short by salvarsan, and fewer women became infected.

These observations teach us two lessons. The first, the success of modern scientific methods in preventing the most terrible malady to which man is subject. The money spent on clinics for the treatment of venereal diseases will in a few years be amply repaid. The other lesson is the effect of educational propaganda and publicity. I attribute the whole fall in the number of deaths from general paralysis among females up to the year 1919 to the instruction given to infected males. I believe also that those who have mainly benefited by the knowledge thus imparted have been the innocent wives of the less educated classes. Among these classes the proportion of women to men suffering from general paralysis is about 1 to every 4, but it may be as high as 1 to every 3. Among patients of the richer and better educated classes the proportion is very different: at Craig House there has been only one lady admitted suffering from general paralysis during the last twenty-four years, as compared with 73 men.

Prevention of Senile Insanity.

As to measures for the prevention of insanity during senility, Professor Robertson continued, we are guided by the knowledge that the later in life insanity begins the less important is the factor of hereditary predisposition in its causation; and that, in all forms of insanity occurring during senility, the influence of the body, if not paramount, predominates. For the prevention of insanity during senility we must begin to interest ourselves in bodily hygiene at a much earlier period. The diseases of old age are usually insidious in origin and gradual in development, and their seeds have been sown in middle life or even earlier. Syphilis and chronic alcoholism, for example, may not lead to any form of insanity in the early or middle periods of life, but owing to a progressive degeneration of the blood vessels of the brain and to a general lowering of the vitality, they may induce premature and marked senility and be the essential agents in the causation of insanity late in life. Prevention is then too late. Without doubt preparation for a healthy old age by careful living during the middle period of life is the best insurance against senile insanity. The measures employed to prolong life, by increasing the number of the aged in proportion to the rest of the population, increase the total amount of insanity, for senility is the insanity-producing period of life. If this be associated with later marriage, a falling birth rate, and emigration of the young and fit, so that there is a proportionate diminution of the non-insanity-producing period of life, then in spite of all the efforts of mental and physical hygiene—indeed, partly on account of these efforts—the amount of insanity in proportion to the total population must show a marked increase. These statistical fallacies have to be eliminated before the relative amounts of insanity from year to year, or in different areas, can be compared with accuracy. The alarmist, naturally, does not trouble to do this.

Is Insanity on the Increase?

Professor Robertson then turned to the question, Is insanity on the increase? After pointing out that all nations seem to pass through periodic phases in which fears arise that among them the occurrence of insanity is on the increase, he said that so far as can be judged the outlook in this country at the present time is distinctly favourable. In Scotland the total number of insane persons has fallen from 390 per 100,000 in the first quinquennium of the last fifteen years to 369 in the last; and the number of insane persons registered annually for the first time has fallen from 2,828 in the first quinquennium to 2,731 in the last, although the population has increased in number.

*A dem
of the An

that the lantern is not moved while adjusting the lens. The image of the tungsten ball on the paper should not exceed 10 mm. in diameter. The paper is now removed and the iris diaphragm of the substage swung out and the dark-ground condenser gently placed into position on the substage. Great care must be taken not to touch the mirror or to move the microscope while this manipulation is being carried out. The condenser is then racked up to the level of the stage. The 2/3 inch objective, which has already been centred, is put in position and a No. 1 eye-piece inserted into the draw-tube. The surface of the condenser is brought into focus and the rings engraved on the surface are carefully centred by means of the centring screws of the carrier of the condenser. The apparatus is now ready for use.

To examine the cultures, switch on the heating bulbs of the microscope incubator and allow the temperature to become steady at 38° C., if this has not already been done. Open fully the iris diaphragm of the lantern and note again that the dark-ground condenser is centred correctly. Rack down the condenser about 1/4 inch. Take the culture to be examined and on the under side of the glass slide place a large drop of cedarwood oil. Place the slide in position on the stage of the microscope and rack up the condenser until the oil on the slide touches the top of the condenser. Air bubbles must be avoided. Focus the central fragment of tissue in the culture and clamp slide to the stage. Rack up the condenser; a dark circle gradually appears in the centre of the field, which becomes smaller as the condenser is raised, and suddenly a very bright image of the tungsten ball is seen focused on the fragment. This bright image should be exactly in the centre of the field. When the light is seen truly centred through the fragment the 2/3 inch objective is removed carefully and replaced either with the 1/8 inch or the 1/12 inch oil immersion as required. The iris diaphragm of the lantern is closed to an opening of about 1/8 inch in diameter and the oiled objective brought down and focused on the central fragment. The condenser is now racked slowly up, and if the centring is true a small area of light will be seen in the centre of the field. If the centring is not quite true this area of light will appear to one side of the field, and a slight adjustment of the objective with the key of the carrier is permissible in order to bring it to the true centre. If, however, the area of light is quite outside the field then the apparatus must be again set from the beginning. The worker is warned that it requires considerable practice to obtain this true centring, but unless the necessary skill is acquired good results cannot be expected. When the light is correctly centred the culture is moved by the mechanical stage so that cells at the edge of the central fragment which are in single layer are brought into the field. To obtain good definition the objective and condenser are carefully focused and the light of the lantern is adjusted by the iris diaphragm of the lens. A mercury green line filter placed in front of the lantern renders the light approximately monochromatic and increases the sharpness of the image; in addition, light of this colour is useful in preventing eye-strain.

It should be noted here that the dark-ground method of illumination shows up one thing only, and that is the interface between two surfaces of different refractive index. When each of the substances on either side of the interface is clear then the interface is shown as a white line with blackness on either side of it. If, however, one of these substances should contain, for example, particles of a different refractive index, then this substance will appear granular or cloudy, according to the size of the particles. A bright light will show up as a cloud the presence of particles which, owing to their fineness, a less bright light would leave as a complete blackness.

Cultures of tissue cells of about eighteen to twenty-four hours' incubation which are growing well should be selected for examination. In such cultures the outlines, internal structures, and complex internal movements of the vegetative cells are clearly shown. The vegetative cells when growing upon the cover-slip usually have a feather-like outline. The cytoplasm is clear and in it the various cell structures are seen embedded; the nucleus appears as a clear oval or rounded body with a sharp outline and contains one or two distinct, slightly opaque bodies—the nucleoli. In the cytoplasm the most prominent objects are small globules of fat which are present in varying numbers in practically all cells cultivated *in vitro*. These fat globules are seen as very bright refractile spheres. The fat globules vary much in size and become larger and more numerous as the culture grows older. A varying number of fine somewhat refractile granules are also seen; these are quite small and not so bright as the small fat globules. The mitochondria are clearly seen in the cytoplasm as fine threads which vary greatly in length. The centrosphere shows as an obscure area on one side of the nucleus. The cell undergoing mitosis is not well shown by dark-ground illumination, as such cells become spherical in shape and thus are not so suitable for critical study as the flattened vegetative cell. The fat globules, however, and some of the small granules and some of the mitochondria can usually be made out lying round the clear spindle-shaped area of protoplasm, in which can be seen indications of the chromosomes, especially when the cell is at metaphase.

The structures described above can be well seen in cultures examined under dark-ground illumination at room temperature without the use of a microscope incubator, but the fascinating movements of the cell and its structures do not take place under these conditions.

REFERENCE.

[1] Strangeways, T. S. P.: Observations on the Changes seen in Living Cells during Growth and Division. *Proc. Roy. Soc.*, B, xciv, p. 137.

Memoranda;

MEDICAL, SURGICAL, OBSTETRICAL.

A METHOD OF REDUCING CERTAIN DISLOCATIONS OF THE SHOULDER.

I was recently called to a colliery ambulance room to see an old man—an underground haulier. He was sitting on a bench with the right arm hanging down by his side, and he was apparently in great pain.

Half an hour before the patient had been pushed by his horse and had fallen against the side, receiving a sharp blow on the upper and back part of the right shoulder-joint. He had "felt his arm go out" and had 'felt sick." He had a very obvious subcoracoid dislocation of his right shoulder-joint. He had never before had a dislocation.

Stripping him of his shirt, I tried Miller's method of reduction with countertraction by means of a towel round the chest for some time, but without success. I then carried out Kocher's manœuvres, but these also failed to effect reduction. I resorted, in turn, to hyperabduction with traction, to leverage with the patient's arm round my waist, and to the heel in axilla method. These were all unavailing. I was about to administer an anaesthetic when it occurred to me to try a simple manipulation of the head of the humerus, which I could feel medial to the biceps and coraco-brachialis muscles. This was immediately successful—despite the fact that the patient was not faint, nor were the muscles relaxed. Further, the successful method caused the patient no pain at all. The plan was as follows (for right shoulder):

1. With the patient recumbent, the right arm is grasped at the elbow and lifted forward and upward until the patient's arm is almost extended above his head. This places the arm in position for movement 2, and relaxes the biceps, coraco-brachialis, and deltoid muscles.

2. With the patient's arm still raised, pressure is applied to the elbow as if trying to make the head of the humerus touch the table. The line of force is thus vertical, from the elbow through the shaft and head of the humerus. At the same time the operator's left fingers are spread out on the back of the patient's right shoulder, while the thumb in front presses the head of the humerus downwards and so helps it to travel back under the muscles whence it came. By this manœuvre the head of the bone passes back round the neck of the scapula to a position below the glenoid cavity. The dislocation is thus converted into a subglenoid one.

3. The patient's arm is now brought down parallel with the trunk.

4. Finally, with the operator's clenched left fist in the axilla to act as a fulcrum, the patient's elbow is now approximated to the side—when the head of the bone will re-enter the capsule, and will be felt—and heard—to slip over the labrum glenoidale into position.

After-Treatment.—In this it is important that the elbow on the injured side be well supported, thus preventing the head of the humerus from pressing on the damaged lower part of the capsule.

Pontycymmer, Glam. VERNON NEWTON, M.R.C.S.Eng.

The source of light used for illuminating the object is a pointolite of 100-c.p. This is fixed in a special lantern constructed of metal plate, made by Maflin. In the front is a Zeiss aplanatic condensing lens (Model Ic.) with iris diaphragm. The lamp is capable of being centred to this lens, and the whole lantern with the lamp can be tilted either vertically or horizontally as one unit. Fig. 1 will make the construction of this lantern clear.

The examination of the cultures is made in an incubator regulated by a Hearson thermostat and containing the microscope (Fig. 2).

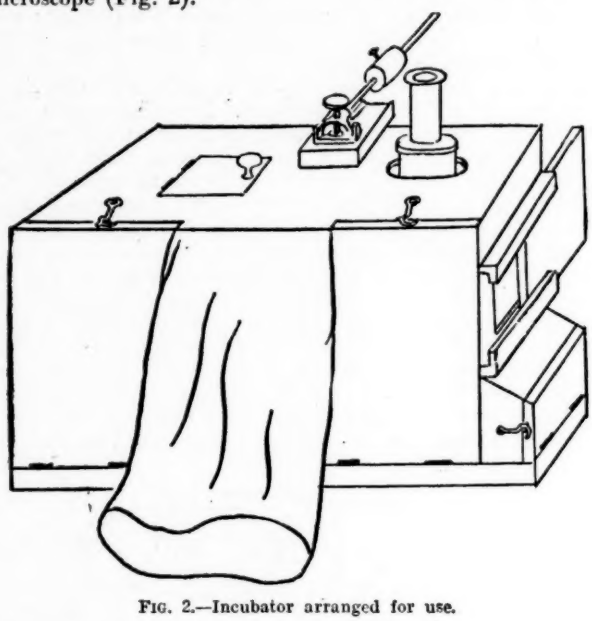

FIG. 2.—Incubator arranged for use.

The incubator consists essentially of a wooden box 20 inches long by 9 inches wide by 12 inches high.

The microscope is placed inside close to the right-hand end in order that a camera lucida attachment with drawing-board may be employed. The tube of the microscope projects through a hole 2 inches in diameter in the top of the box. This hole has its centre 3½ inches from the front and 3 inches from the right-hand side. To the left of this opening a square is cut out of the top of the box and fitted with a sheet of glass through which a view may be obtained of the interior. This square is fitted with a hinged wooden door. In the front of the box opposite the mirror of the microscope is a window, fitted with glass, through which the light is admitted to the microscope from the lantern.

The back of the box is divided vertically into three equal portions, the left and right being closed with a door, hinged at the bottom, giving access to the heating elements and the microscope respectively. The middle partition is open, and is fitted with a velvet sleeve through which the microscope is manipulated.

The heating elements consist of two 16-c.p. carbon filament lamps run from the mains, one of which is kept permanently alight and the other is connected in series with a Hearson's capsule thermostat regulated at 38° C. The connexions required are shown in Fig. 3.

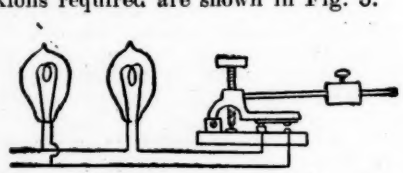

FIG. 3.—Heating elements showing connexions.

The capsule is protected from the direct radiation of the lamps by means of a small cardboard tray suspended beneath it.

The mirror in the model of the microscope employed is ordinarily attached to the substage condenser, so that it moves with it. When a focused source of light is used this form of apparatus is inadmissible, and the mirror is therefore removed from the microscope and attached to the floor of the box on a sliding base. The microscope is placed so that it stands vertically over the mirror, and is kept in position by a horseshoe-shaped plate of lead 1 inch thick, cast so that it fits the base of the microscope stand (Fig. 4).

This arrangement keeps the microscope rigidly in position during the various manipulations required, and at the same time allows the whole instrument to be moved at will and its position adjusted as required.

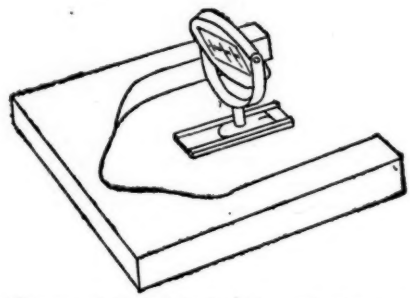

FIG. 4.—Mirror and lead plate to fit base of microscope stand.

The dark-ground condenser is made by Swift with numerical aperture 0.95. The objectives used are 1/8 inch oil immersion by Swift with numerical aperture 0.95, or a 1/12 inch objective by Zeiss suitably stopped. The selection of the objectives is of considerable importance. Many of the stops supplied to bring down numerical aperture of the ordinary 1/12 inch do not fit closely to the back of the lens, and thus perfect definition cannot be obtained. The authors advise an objective of the correct numerical aperture. The usual eyepieces are used, and also an X10 Telaugic by Swift.

The apparatus is assembled as follows. The pointolite lamp is first adjusted in the lantern so that the centre of the lens is in alignment with the point of light of the lamp. To ensure this the light is focused through the lens on to a strip of white paper about 4 feet away, and the bright image of the glowing tungsten ball of the lamp is thus readily obtained. The lamp is now moved vertically and horizontally as required until the image of the tungsten ball is clearly seen surrounded on all sides by an equal halo of coloured light. It will be found that as the lamp is moved the halo moves to one or the other side of the circle of light, and a truly centred beam is only obtained when the coloured halo is seen encircling the light evenly. The lamp is now fixed in front of the microscope incubator and focused on the mirror at such a distance that the size of the tungsten ball on the mirror is not larger than 10 mm. in diameter. This is ensured by pasting upon the concave surface of the mirror a piece of paper with a scale marked upon it as shown in Fig. 4. The mirror is now turned round so that the plain surface receives the light. The microscope, with all the lenses removed, is now adjusted so that the light passes directly upwards through the draw-tube. This is a detail of great importance and requires practice. The iris diaphragm of the substage is placed in position. The beam of light is now thrown upon the ceiling through the draw-tube, and by alternately opening and closing the iris diaphragm of the substage and that in front of the condensing lens of the lantern it is possible to judge if the beam of light from the lantern is passing centrally through the draw-tube; the two circles of light, which may be caused to increase or decrease in size by opening one or other of the iris diaphragms, must coincide exactly and the circle of illumination must show relatively sharp edges, blurring on one side or the other indicating that the beam of light is not central. When the light has once been centred, the lantern, the microscope, and the mirror must on no account be moved again or shaken. If accidental movement occurs during subsequent manipulations the whole process of centring must be repeated. A piece of white paper is now inserted on the top of the substage about 3/4 inch below the opening in the microscope stage. The light is carefully focused on this sheet of paper by moving the condensing lens on the lantern in or out, care being taken

In addition, provocative diagnostic doses of sanocrysin have been given to three patients. It is considered that sanocrysin has a beneficial effect when used with discretion and is likely to become a part of the routine treatment in selected cases of pulmonary tuberculosis.

BROMPTON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (DR. L. S. T. BURRELL).

At this centre also observations had not been commenced at the date of the first report a year ago.

Twenty cases were selected for treatment, as being patients who were getting worse or had failed to improve after other methods had been tried. These form the large group of fibrotic or fibro-caseous cases, slowly progressive with frequent relapses and periods of improvement. Time will show whether or not the progress of disease can be checked in these cases by sanocrysin, and in this report it is only the immediate result that can be shown.

In the first 5 cases in the series artificial pneumothorax had been induced with very good initial results. In each case, however, there had been a relapse with return of sputum containing tubercle bacilli. After a short period of treatment with sanocrysin one patient was slightly worse. The other four improved, two of them losing the tubercle bacilli from the sputum.

The next 8 cases, Nos. 6 to 13, were of the fibro-caseous type. In all, sputum containing tubercle bacilli was present. After sanocrysin the number of tubercle bacilli in the sputum was reduced in every case and in four they disappeared altogether, though they reappeared in two of these.

In another case, No. 14, there was long-standing disease complicated by a chronic pleural effusion, which was converted into a hydro-pneumothorax. Sanocrysin was given in order to control the disease in the other lung, but it had no apparent result, either good or bad. No. 15 was one of spontaneous pneumothorax, and again the sanocrysin was given in an attempt to improve the condition of the other lung. The patient, however, became worse.

In the final 5 cases there was bilateral disease; the worse lung was treated by artificial pneumothorax and sanocrysin was also given in the hope that it would have a good effect on the disease in the other lung. Of these 5 cases the tubercle bacilli disappeared from the sputum in 4 (though in one they reappeared) and in the other they were much reduced in number. This result, however, was probably due largely to the pneumothorax, and in one case (No. 16) the tubercle bacilli disappeared after the pneumothorax had been induced but before the sanocrysin was started.

The sanocrysin was given intravenously and the initial dose was 0.25 gram. This was followed a few days or a week later by 0.5 gram, then 0.75, and finally 1 gram. This was the maximum dose given, and was repeated weekly. It was noticed that in many cases no reaction occurred until a dose of 0.75 or 1 gram was reached, and that the reaction got less on subsequent injections. In two cases small doses (0.1 gram) were given daily for a week, and then this course repeated after a week's interval. This method had no effect in one case, and in the other it produced slight albuminuria, pains in the limbs, and disappearance of tubercle bacilli from the sputum. This method of giving frequent small doses might possibly be of advantage in acute cases.

Taking the 20 cases as a whole, 2 became worse and 18 improved or remained unchanged. In 10 cases tubercle bacilli disappeared from the sputum, although in 3 of these they reappeared. In 5 cases there was no reaction after the injections. Rigors occurred in 9 cases, and a slight evening rise in temperature with shivering and malaise was also noted after some of the injections. A long febrile reaction was seen in only 2 cases, Nos. 1 and 13. An erythematous rash occurred in 4 cases. Vomiting a few hours after the injection in 9 cases. Pain in the limbs was present in 4 cases. Albuminuria was noted in 3 cases only and was very slight and transient. One patient complained of a metallic taste in the mouth, and small blisters appeared on the mucous membrane of the mouth.

WARWICKSHIRE KING EDWARD VII MEMORIAL SANATORIUM, WARWICK (DR. F. R. G. HEAF).

Twenty patients suffering from pulmonary tuberculosis (all stages, with tubercle bacilli present in the sputum) have been treated with sanocrysin, and 6 are still under treatment. Of the 20 patients, 2 left before the course of treatment was completed, and in 2 cases treatment was stopped owing to the advanced state of the disease. Of the 16 remaining cases, 10 were regarded as quiescent at the termination of treatment, tubercle bacilli being absent from the sputum and *x*-ray evidence and physical examination indicating marked improvement; 1 was improved but tubercle bacilli were still present; 2 showed no alteration, and 3 were worse. In 2 cases sanocrysin was given in conjunction with artificial pneumothorax treatment, and the progress of a recent lesion on the side opposite to the collapsed lung was arrested.

Dr. Heaf hopes to be able to report on the after-history of the patients at the expiration of one year. He concludes that sanocrysin arrests the early progressive lesion but has little or no effect upon lesions associated with fibrosis.

WALES (PROFESSOR S. LYLE CUMMINS).

Sanocrysin has been tried at three centres in Wales under the general supervision of Professor S. L. Cummins. In all, 16 cases have been fully treated, as follows:

At Glan Ely Hospital, Cardiff: Professor Cummins, 6 cases; Dr. A. Brownlee, 1 case.
At Cymla Hospital, Neath: Dr. N. Tattersall, 6 cases.
At South Wales Sanatorium, Talgarth: Dr. H. E. Watson, 3 cases.

Details of the individual cases and their results are given elsewhere[3] by Professor Cummins and Dr. Tattersall. The after-history of the cases quoted in the original report a year ago is as follows:

Case 21.—The patient was sent to a sanatorium. Sputum was negative for a time, but in July became positive. Two more doses, 0.5 gram and 1 gram, were given. Tubercle bacilli disappeared from the sputum and the patient regained weight. He now has persistent albuminuria.

Case 22.—The patient returned to work at a colliery in April, 1925. In July tubercle bacilli appeared again in the sputum, and he was later admitted to hospital. A second course of 2.25 grams was given in November. The patient has regained weight and is now capable of light graded work.

Two cases of extensive and obviously grave pulmonary tuberculosis, aged 14 and 15 respectively, died two or three months after sanocrysin treatment, which did not appear to have influenced the illness in any markedly unfavourable way.

One of Dr. Watson's cases developed exfoliative dermatitis, presumably from metallic poisoning, after 6.25 grams.

Dr. Tattersall's patients had all given fairly good results. Professor Cummins, apart from the two expected deaths in toxic cases, had four favourable results. "There was dramatic and rapid improvement in each of them after a short course of sanocrysin. The tubercle bacilli disappeared from the sputum and the weight after treatment got back to or outstripped the highest known weight. This favourable change, though not persistent, was maintained for several months after the course of treatment." Professor Cummins concludes that sanocrysin, *judiciously used*, is a valuable means for raising the less advanced type of "hospital" case up to a "sanatorium" level, and perhaps for the actual cure of some cases of a more favourable clinical type.

EDINBURGH ROYAL INFIRMARY (PROFESSOR SIR ROBERT PHILIP AND PROFESSOR D. MURRAY LYON).

Twenty-two cases of tuberculosis have been treated by means of sanocrysin. Undoubted cases of tuberculosis were selected who had already benefited by institutional treatment. All cases were afebrile. Seventeen were examples of pulmonary tuberculosis with tubercle bacilli in the sputum. The lesions ranged from slight localized nodules to extensive cavity formation or marked fibrosis. The series examined also included 2 cases of tuberculosis of the glands, 1 of renal tuberculosis, and 2 of lupus. Other therapeutic measures were discontinued during the trial of sanocrysin. Eight patients had previously had more or less prolonged treatment with tuberculin by percutaneous method.

The patients received from two to ten injections of sanocrysin, the most usual number being six. The quantities of sanocrysin administered have varied from 1.5 to 10 grams. In all cases the initial dose was 0.5 gram, and subsequent injections have usually been 1 gram. Antituberculous serum was given in 10 of the cases and in small quantities only (doses of 20 to 40 c.cm.), but its use was not encouraging.

Considering first the 5 cases of non-pulmonary tuberculosis, the renal case was unimproved. One case of tuberculosis of the glands was improved, the glands becoming more discrete and distinctly smaller; in the other case the treatment had to be discontinued owing to severe local inflammation. The 2 cases of lupus after each injection of sanocrysin exhibited a considerable congestion in and around the affected area. Later the scales practically disappeared and the centres of the lesions became pale as if cicatrization had increased. The margins, however, remained red and raised in nodules. When last seen, ten months after the beginning of treatment, both cases had relapsed, the lupus areas appearing active and heavily encrusted.

Of the 17 cases of pulmonary tuberculosis the treatment had to be discontinued in 7 cases—in 3 because of the severity of the reactions and in 4 others on account of the discomfort and distress experienced by the patients. Of the 10 cases that underwent the full course, 7 ultimately showed decided improvement when examined from five to ten months after the termination of treatment. One, who was apparently doing well, subsequently had several attacks of haemoptysis and died.

In studying the effects of the sanocrysin treatment of tuberculosis, the Edinburgh workers state that the principal questions to be answered are: (1) Whether sanocrysin possesses any specific action against tuberculous tissues. (2) Whether its employment has benefited the patients subjected to it. (3) Whether the present method of administration is the most suitable.

(1) It is observed that the reactions which follow the administration of sanocrysin might arise in different ways: (*a*) the drug, unchanged or chemically altered, may act on the tissues directly; (*b*) as a result of a selective action of the gold on tuberculous tissues and organisms, specific toxins might be liberated. The resultant reactions might be termed "gold" effects and "tuberculin" effects respectively. The evidence suggests that the focal reactions, the increase of sputum, the papulo-erythematous skin eruptions, the pyrexia, and the gastric symptoms, especially vomiting, which the authors noted accompanied the earlier doses of sanocrysin in a course, may be regarded as "tuberculin" effects. On the other hand, the albuminuria which occurs late in the course and in association with desquamative skin lesions and many of the alimentary symptoms (stomatitis and diarrhoea), appears to be a "gold" effect due to irritation accompanying the accumulation of the metal in the renal cells. The gold salt, therefore, appears to produce two types of effect in the body: the "specific" action on tuberculous areas which is immediate, and the cumulative poisoning seen in the excretory organs. The authors add that two questions still remain unsolved—namely, the cause of the early decline of the "tuberculin" reactions, and

THE GOLD TREATMENT OF TUBERCULOSIS.

SECOND REPORT BY THE MEDICAL RESEARCH COUNCIL.*

THIS second report deals almost entirely with clinical experience. It does not attempt a review of the laboratory evidence on what is at the root of the whole inquiry—namely, the action of sanocrysin in arresting the spread of tuberculosis implanted experimentally into animals.

CLINICAL OBSERVATIONS.

The results are given briefly for each separate clinical centre at which the observations were made. For convenience of reference the after-history of individual patients who were given by serial numbers in the first report[1] is here described under the same serial numbers. No new reference numbers are given for fresh cases described in the present report.

ST. BARTHOLOMEW'S HOSPITAL (PROFESSOR F. R. FRASER AND DR. C. F. HARRIS).

Eleven cases of pulmonary tuberculosis have been treated or are undergoing the treatment. Two cases of abdominal tuberculosis were treated and one case of lymphatic leukaemia was studied as a control. The cases of pulmonary tuberculosis were all of a more chronic type than those in which the best results are reported from Denmark. One death occurred after a few doses of sanocrysin, which were given only because a fatal issue seemed inevitable. Severe reactions were experienced with large doses, but later it was found that with smaller initial doses at longer intervals the treatment was well tolerated. No striking results have been obtained, but the unexpected improvement in certain cases suggests that sanocrysin may be of service in the early cases of pulmonary tuberculosis or in the fresh spread in more chronic cases. The general impression has been formed that the method of treatment deserves further investigation.

LONDON HOSPITAL (PROFESSOR ARTHUR ELLIS).

Since the publication of the last report only one new case of pulmonary tuberculosis has been treated. This patient, whose condition was desperate at the time treatment was commenced, improved to a very remarkable extent. The patient had been under observation in hospital for nearly a year and was going very rapidly downhill with hectic temperature, repeated haemoptysis, and severe pleural pain. At his own insistence a course of sanocrysin injections was given. No severe reactions occurred and improvement was rapid and continuous. He became afebrile, pain, cough, and haemoptysis disappeared, his sputum diminished from four ounces daily to slight morning sputum only. He was discharged to a sanatorium and when last heard from some weeks ago was doing well.

The after-histories of the cases detailed in the first report have been as follows:

Case 1.—Has been in a sanatorium and is now back at home. His general condition is much the same as on discharge, but the breath is now definitely fetid and the moist sounds at the right base are much more numerous. The cough and sputum have both increased. There are no tubercle bacilli in the sputum.

Case 2.—Gradually failed, and died in his home in January, 1926. No *post-mortem* examination was obtained.

Case 3.—Downward progress continued. He died early in June, 1925, five months after the last injection of sanocrysin. Specimens of various viscera were obtained *post mortem* and sent to an analytical chemist for analysis for gold. The kidney, liver, and colon contained no trace, but in a portion of the lower lobe of the left lung a definite trace of gold was detected, estimated roughly at 3 mg. per 100 grams of lung tissue. The total gold salt used in this case was only 1.5 grams.

Case 4.—Recovery from the exfoliative dermatitis eventually occurred. Coincident with this, the exacerbation of the tuberculous process gradually subsided and the patient again became afebrile. She is now able to be up and about, but the physical signs are more extensive and her general condition worse than before treatment was given. It is some three months since she was last seen.

Case 7 (Control).—This patient was a case of Hodgkin's disease treated with sanocrysin as a control. The patient died in January, 1926. No *post-mortem* examination was obtained.

Professor Ellis considers that the value of the serum is doubtful. He suggests that his bad results may have been due in part to serum. All the cases that did badly had very severe serum sickness. It was in the period of resulting prostration that exacerbation of the tuberculous process was particularly manifest.

ST. MARY'S HOSPITAL (PROFESSOR F. LANGMEAD).

No new cases are reported. With regard to the original cases:

Case 9.—Convalescence was satisfactory. The patient went to Ventnor for six months, where tubercle bacilli were present in the sputum at first. Her health is now fairly good. The sputum has been free from tubercle bacilli for some time, and radiograms show that there has been no spread of disease.

Case 10.—Satisfactory convalescence. At work as a carman since August, 1925, and no tubercle bacilli in sputum. A similar recovery had occurred previously, and before sanocrysin treatment, when the patient had been rested in a sanatorium.

ST. THOMAS'S HOSPITAL (PROFESSOR H. MACLEAN AND DR. G. T. HEBERT).

Ten new cases have been treated with considerable, though it may prove to be only temporary, improvement.

Out of the five original cases which were chosen as being of a mild type, two have relapsed decisively. The after-history of all the original cases is as follows:

Case 11.—Has kept well; no evidence of active tuberculosis, but is under treatment for pityriasis rosea.

Case 12.—Went to a sanatorium for three months, until June, 1925; tubercle bacilli in sputum at that time. He was in good health three months later but not at work; then married and moved out of London, leaving no address.

Case 13.—Went to a sanatorium for three months, until July 8th, 1925; apyrexial, but tubercle bacilli in sputum at that time. He worked in the country as a grocer's assistant till December, 1925, when symptoms of active disease reappeared. In January, 1926, there was infiltration of both lungs, and in March, 1926, he was admitted to the Lambeth Hospital.

Case 14.—Went to a sanatorium for three months, until July, 1925. No further definite symptoms of tuberculosis. The patient is now at work.

Case 15.—Lived in the country during the summer of 1925. In September, 1925, was not looking well, but no tubercle bacilli were present in the sputum. Patient had pleurisy of the left side in December, 1925, followed by symptoms of active pulmonary tuberculosis. Admitted to a sanatorium in February, 1926.

UNIVERSITY COLLEGE HOSPITAL (PROFESSOR T. R. ELLIOTT).

Twelve cases of tuberculosis have been treated, including the four described in the first report. Three were of glandular or osseous infection and gave no special information. There were seven patients with pulmonary tuberculosis.

Case 16.—In the first report it was concluded that the girl had been made worse by the treatment. After discharge from hospital she remained at home in a poor environment. But she is now well and back at work. There are no tubercle bacilli in the sputum, and the disease appears to be completely arrested; an unexpectedly good recovery in view of her originally poor physique.

Case 18.—The patient returned to work soon after discharge from hospital and remains well.

Case 19.—The boy went to work with very long hours in a factory last autumn. His health broke down and he was readmitted to hospital. There appeared to be more extensive fibrosis in the lungs, but there were no tubercle bacilli in the sputum. He recovered quickly and was then sent to the country.

One new case of pulmonary tuberculosis developed very serious jaundice, with clay-coloured stools, after two doses of 0.5 and 1 gram respectively. Recovery from the hepatitis was slow and treatment was therefore discontinued. Such toxic jaundice appears to be rare in Danish experience. A similar but fatal case was described (Case 8 from St. Mary's Hospital) in the first report.

Another patient with extensive caseous lesions in the left lung and only two months' history improved with great rapidity under treatment. The fever ceased after two severe rash reactions, and ultimately the tubercle bacilli disappeared from the sputum. Three months later a relapse occurred at a sanatorium during December. The patient was readmitted to hospital, with further spread in the lungs and tuberculous laryngitis. A second course of sanocrysin failed to evoke a rash or high pyrexia. The patient is still under treatment and appears to be improving only slightly.

One control case was tried, a woman aged 25, with prolonged fever ranging daily from 99° to 101°, and high eosinophilia—60 per cent., of unknown cause. Three injections of 0.5 gram each were given; no rash resulted nor any obvious temperature change.

The best results in tuberculous infections seem to have been obtained when the patient reacted strongly with fever and a rash. Professor Elliott concludes that the treatment is definitely beneficial in early cases without extensive fibrosis, though it is rarely capable of effecting a rapid and complete arrest of tuberculous disease.[2]

GUY'S HOSPITAL (DR. G. MARSHALL).

Sanocrysin had not been used at this centre at the time of the first report. During the last year eight cases of pulmonary tuberculosis have received treatment. All these cases had extensive pulmonary disease and were of some length of duration. Three cases showed apparent arrest, two cases improved, while the remaining three cases were unimproved. In no instance was the disease extended by the treatment. The improvement resulted after other modes of treatment, such as rest and sanatorium, were tried and failed. Severe reactions with exanthem and albuminuria have been observed, although small doses were employed. One case of infective endocarditis, in which the spleen diminished in size and became impalpable, ceased treatment after eleven doses.

* The first report was published in the BRITISH MEDICAL JOURNAL on April 18th, 1925 (p. 735).

British Medical Journal.

SATURDAY, JULY 24TH, 1926.

THE PRESIDENTIAL ADDRESS.

THE address of the President of the British Medical Association, delivered this week at the Annual Meeting at Nottingham, deals with many thought-compelling problems of medical work. Mr. Hogarth addresses himself primarily to medical practitioners. His aim is to discuss certain problems with his colleagues. But since these problems concern the public weal the address may be read with profit by a wider circle than the medical profession, as we have no doubt it will.

The part of the address that will make the largest appeal to the student of the times is the exposure of two apparently opposing tendencies to be found in current expressions of opinion outside medical circles. On the one hand there is a cry for greater freedom of medical practice. The public, it is said, is weary of medical etiquette and of the shackles of order and precedent. Some, who have the ear of the public in literary and dramatic affairs, deride the *Medical Register* and all it stands for, and protest against its continued limitation to those who, as diligent students, have sought to make themselves familiar with the human body, its form and functions; and with disease, its manifestations and mastery; and as they deride the hard-trodden road of achievement, so they exalt the unknown and mysterious, the clamant and blatant. Some of these, in the words of the President, are " good people, invincibly credulous and optimistic by nature, who chatter about cures and treatment as others chatter about politics, and on whose ears well syllabled words like ' osteopathy ' and ' manipulation ' fall with a sweetly modulated cadence of solace and hope. The other class consists of the ingenious rebels against all authority but their own, the sophists of the day." There is in the cry of these persons something of the blood-stirring appeal of the revolutionary which often strikes a spark in even the sanest minds. On the other hand, there is the direct reverse of this attitude to be found among a large section of the community. This is not a revolt, it is a reaction, a tendency to revert to a mediaeval attitude of mind which yearns after the super-authority or something whose efficacy is supernatural. It seeks to harness some ineffable influence to the chariot of progress, which seems to them to drag heavily and advance too slowly.

Both the revolutionary and the reactionary seek short cuts to ends which are equally the aim of scientific medicine. But the methods of attainment differ as the poles. Medicine aims at attainment by continuous experimentation and verification; it would make sure of the stability of each step of advance. Whereas the revolutionary and reactionary would take haphazard leaps into the unknown, with results the experience of generations has shown likely to be disastrous to those who are ministered to if not to the ministers of these cults. The President wisely shows that, steadfast as modern scientific medicine is in its adhesion to the road of experiment, observation, and verification, this steadfastness does not exclude, but most emphatically includes, a constant vigilance and preparedness " for the crash of old-established notions and for restless movements of insurgence along boundaries which once appeared to have been fixed for all time." And, also, the ever-present recognition that " there is a certain healing power, a true *vis medicatrix*, in religion as in nature, . . . some serenity of mind in the patient, . . . some tranquillizing influence of the soul upon the physical stress and tumult of the senses—beneficent, soothing, healing activities in which [the doctor] and his art have had little or no share."

On more general questions the President's strictures on unbalanced rejoicings at improvements in bills of mortality are most pertinent. What good is there, he asks, in the mere prolongation of life either to the individual or the nation " unless there is a real capacity to enjoy it "? Our aim must be to raise the general standard of health among all ages of the community. But we still have among us " an enormous mass of bruised and damaged humanity which never enjoys robust health, which is continually ailing, . . . and never approaches full industrial efficiency." He observes that it has been the gradual recognition of these facts that has brought about a community medicine—an effort on the part of the State to concern itself more and more with the health of the nation. The establishment of the Ministry of Health bore witness, not to the sudden discovery of a new truth, but to the proved results of much admirable work which had been done in the previous half-century and to the need of its more resolute prosecution. Pure water, good drainage, better housing, industrial hygiene, compulsory notification of disease, licensing laws, all proved their effectiveness.

The scope of preventive legislation is almost limitless, and Mr. Hogarth sees the possibility of the State intervening more and more in the interests of public health. But with advantages he sees possible risks. A logical development in a socialist State might make all medicine directly subservient to the State. He concedes that such a system of State medicine might be worked, but adds: " Whether it would be as efficient as our present system, whether it would be as acceptable to the general body of the people, and whether the vastly increased cost would be repaid by equivalent advancement of medical knowledge or improvement in the public health, there is room for the very gravest doubts." Nowhere, he believes, is such a conclusion more likely to be realized than in the hospitals. He does not suggest that the hospitals would wither if the voluntary principle were abandoned. They would still multiply and prosper. Their orderly routine might possibly show an even more brilliant and imposing efficiency. But " there is something inherent in officialdom which freezes the genial current of the soul, and thaw it as you will by the application of whatever new principles of kindliness and mercy it can never be thawed right out." That there must be changes in our hospital system he clearly recognizes. There must be close co-operation between hospitals; the elimination of that besetting sin of charitable effort, overlapping and wasteful management; and searching criticism of accounts by business men. Again, he points out that the modern voluntary hospital is no longer " the lazar-house of the destitute, the place to which homeless and plague-stricken outcasts crawled to die, or into which they were herded if they seemed too noisome and dangerous to be tolerated at large." The idea of the modern voluntary hospital is far larger and finer. The primary aim of care for the poor is in no way shelved or neglected. But the hospitals, from being mere infirmaries, have become the centres of the best medical and surgical skill in the areas they serve. So it is certain that we shall see the hospital idea still further expanded in the near

the reason for the failure of later doses of sanocrysin to evoke albuminuria.

(2) The immediate effects on the health of the patients have varied greatly. The majority have experienced more or less discomfort and some have suffered severely. The gastric symptoms and tendency to severe dermatitis, combined with the almost universal and often considerable loss of weight, make the treatment a matter not lightly to be undertaken in its present form. To avoid the risk of producing severe reactions it would appear desirable to aim at a smaller concentration of sanocrysin in the system, either by reducing the size of the dose, or by lengthening the interval between the doses, or by combining these suggestions. In several cases a striking reduction has occurred in the number of tubercle bacilli in the sputum. Negative films became more frequent in some patients, but in no instance did the bacilli permanently disappear from the sputum, and, as yet, no patient can be said to have had his disease arrested. Apart from the loss of weight produced no patient has been harmed by the course of treatment. The one death that occurred is not ascribed to the treatment, as it took place after the full course had been completed with apparent benefit at first resulting. Some degree of clinical improvement has been observed in the greater proportion of patients who underwent the full course. No dramatic change has occurred, but there has been in several instances a steady advance at a greater rate than might otherwise have been expected. This improvement has not in all cases been maintained; some of those who did best during the course have since retrogressed, while others who did not seem immediately benefited have since greatly improved.

(3) The authors conclude their report by some observations on the intramuscular administration of sanocrysin. They formed the impression that this method presented some advantages—for example, less albuminuria and less rapid loss of weight—and that further experience was likely to reveal ways of still further excluding the discomfort of the procedure.

PUBLIC HEALTH DEPARTMENT, EDINBURGH (DR. J. GUY).

Dr. Guy has treated 10 cases of pulmonary tuberculosis with sanocrysin. The first 6 were given small and gradually increasing doses; and the last 4 received large doses but not the full doses recommended by Professor Moellgaard. In the first 6 of the series sanocrysin did not appear to have any appreciable effect for good or ill. In the last 4 there appeared to be some slight improvement and lessening of the sputum. This, however, is a regular feature of sanatorium régime. Dr. Guy considers that so far there does not appear to be any marked curative effect from sanocrysin. He infers that the drug has some specific effect on the tuberculous lesion, as in the last 4 cases treated signs of increased moisture were commonly noted after the injection. He regards sanocrysin as worthy of further trial.

NORTHERN IRELAND (DR. A. TRIMBLE AND OTHERS).

A committee was constituted last year to supervise the trial in the Belfast area of sanocrysin as a method of treatment of tuberculosis. The reports from the three institutions selected for the test are thus summarized:

Belfast Municipal Sanatorium (Dr. PERCY WALKER).—Six male patients treated. Each patient received seven injections, totalling 6.5 grams each. All these patients were suffering from pulmonary tuberculosis (Turban-Gerhardt: third stage). Result: 1 case appears to be arrested, 2 are definitely greatly improved, the sputum being now negative as regards tubercle bacilli, 2 are improved clinically but the sputum is still positive. One case shows no change. A second group of 3 patients is still undergoing treatment.

Forster Green Hospital (Dr. B. R. CLARKE).—Twelve cases of pulmonary tuberculosis treated, 11 with tubercle bacilli in the sputum. Results: The sputum of 4 patients became negative; 4 patients had a diminished number of tubercle bacilli, and in 2 patients there was an actual increase of tubercle bacilli after treatment. Clinically 8 of the 12 patients showed improvement, the condition of 2 was unchanged, and 2 appeared to be worse as a result of the treatment. Five further cases are undergoing treatment.

Royal Victoria Hospital (Dr. S. I. TURKINGTON.—Four cases of pulmonary tuberculosis treated. Three cases were definitely improved; in 2 of these cases tubercle bacilli disappeared from the sputum after treatment. The fourth patient had a profound reaction after the third dose of sanocrysin and died from toxaemia. Serum was used in this case, but it had no beneficial effect.

The conclusions of the Belfast Committee are as follows:

1. Sanocrysin is a distinct therapeutic advance in the treatment of tuberculosis in definitely selected classes of cases.

2. The undoubtedly good results that have been obtained must, however, be observed for a further term—say, at least one year—to see whether the results are permanent, or whether further courses are advisable.

3. Sanocrysin as a method of treatment is not suitable for general use, and with our present limited knowledge it should only be used in institutions equipped with the necessary apparatus, and under the direct control of sufficiently experienced physicians, with expert knowledge in the treatment of tuberculosis.

4. Further research is necessary in order to determine: (*a*) the class of case most likely to benefit by this form of treatment; (*b*) the correct size of dose for individual patients; (*c*) the intervals between the doses; (*d*) the length of the whole course of treatment; and (*e*) the significance of the clinical phenomena which would seem to indicate the discontinuance of the treatment.

GENERAL SUMMARY.

Experience in the selection and treatment of cases has greatly lessened the dangers attending the use of sanocrysin. The first collective report by the Medical Research Council described 2 deaths directly caused by sanocrysin out of a total of about 30 cases treated. This second report records only one similar fatality (Royal Victoria Hospital, Belfast) in a much larger number of cases treated—about 140. But the risk remains. There may be sudden or progressive exaggeration of the more serious symptoms of the tuberculous infection, or there may be a poisoning of the kidney, of the liver, and even of the skin with a drug dermatitis which is quite distinct from the relatively transient rash. All these dangerous features are far more liable to arise in the sanocrysin treatment of tuberculous patients than in the use of salvarsan for syphilitic or other infections. All patients under treatment must, therefore, be in bed and under close medical control.

In the last twelve months it has become the custom to give smaller doses of sanocrysin and at longer intervals than those used with the cases described in the first report. The patient is thereby spared from dangerous reactions and even from any great discomfort. It is, however, debatable whether this attenuation of the treatment for the sake of the patient's immediate welfare may not have the disadvantage of lessening the final benefit. The arguments on either side are given in two recent books by Secher[4] and Würtzen[5] respectively, when describing clinical results obtained in Copenhagen.

The special serum has rarely been used, and there is no fresh experience to record about it. Nor is there much more evidence upon the question whether a well marked reaction to sanocrysin can be accepted as a diagnostic test for tuberculous infection. It would, indeed, appear from the reactions seen by Fournier and Mollaret[6] in the treatment of human syphilis with a similar gold salt that such reactions are not specific for tuberculosis. As in the first report, it was again evident that there may be an advantage in collecting evidence from different clinical observers as to the possible benefit of sanocrysin treatment. Some thought that nothing more was seen than might have been expected as the result of prolonged rest under hospital or sanatorium control. But others were very emphatically of the opinion that sanocrysin did cause unusually quick amelioration of all the features of a tuberculous infection, especially in the lessening of sputum and disappearance of tubercle bacilli. The question of secondary infections of the lung tissue by other organisms has not been dealt with. The results described are considered only in their broad aspect of clinical recovery or deterioration, for there are no laboratory tests yet available for analysis of any possible changes in a patient's powers of resistance to tuberculous infection.

The Medical Research Council received, by the generous courtesy of Professor Moellgaard, a free supply of sanocrysin and serum for trial in Great Britain over a period of twelve months. The trial has shown how dangers may be averted, and, in the opinion of some workers, it has given indication that along the line of some such substance as sanocrysin there is definite hope of a drug treatment that will check the progress of a tuberculous infection and allow the patient's natural powers of resistance better play in finally arresting the disease. These various clinical reports, for which the Council is greatly indebted to the observers, will suffice to indicate to the medical profession the general need for extreme care in the use of sanocrysin, and also the particular types of infection in which it may be expected to cause some improvement.

REFERENCES.

1 The Gold Treatment of Tuberculosis, Preliminary Report by the Medical Research Council. BRITISH MEDICAL JOURNAL, April 18th, 1925.

2 T. R. Elliott: *Lancet*, January 16th, 1926.

3 Cummins, Tattersall, and others: Discussion on the Treatment of Pulmonary Tuberculosis with Sanocrysin. *Proc. Roy. Soc. Med.*, 1926, 19, No. 5.

4 Knud Secher: *Treatment of Tuberculosis with Sanocrysin and Serum.* Copenhagen, 1926 (Levin and Munksgaard).

5 C. H. Würtzen: *Recherches sur les effets de la Sanochrysine.* Copenhagen, 1926 (Levin and Munksgaard).

6 Fournier and Mollaret: *C. R. Acad des Sciences*, 1925, 181, 943.

in private practice. The question of payment of the visiting consultant staffs of Poor Law hospitals raised the old issue between the dangers and the advantages of laying down any definite standard of remuneration. The acceptance of definite minima for services rendered on an attendance basis, and the remission to the Council of the question of rates for annual contracts, was probably the utmost advance that could be made in the circumstances. The discussion of psycho-analysis showed a marked division of opinion, not so much on a matter of principle as of practical politics. All were probably in sympathy with Dr. Woodroffe's statement about the difficulties of the general practitioner in this connexion, and with the desire to narrow as soon and as effectively as possible the existing field for misunderstanding. But those who followed Dr. Langdon-Down and Dr. Hawthorne in their opposition to the motion felt, as Dr. Buist briefly suggested, that a scientific association should work scientifically; knowledge was wanted before opinion, and the requisite knowledge on this subject did not exist. This was the assumption underlying Dr. R. G. Gordon's clear and informative speech. There seemed to be some division of opinion also as to the scope of the functions of the British Medical Association in connexion with inquiries of this nature, and as to the procedure proper to them. While the opponents of the Sussex motion argued effectively, Dr. Parry was successful in his determination not to be tied down to the original proposition brought forward at Bath, which the Sussex representatives had explicitly abandoned in favour of the present proposal. The discussion on the General Medical Council served two good ends. It allowed expression to a considerable and well founded feeling of dissatisfaction with the attitude taken up by certain sections of the public and the press, and permitted a vindication of the manner in which that Council had faced the resulting position by reference to the facts. It was an interesting commentary upon the theory of public transaction of business, as opposed to secret deliberation, that whereas the members of the lay press were very naturally requested to withdraw in order to ensure freedom of statement on the part of the members of the General Medical Council who explained its methods and machinery, when these statements had been made it was found that their publication would be definitely in the public interest. The ending of the debate by Dr. Dain's motion to proceed to the next business was an excellent example of the statesmanlike use of that method of procedure as opposed to its more frequent abuse in other assemblies. The installation of a microphone and "loud speakers" during the luncheon interval was the outcome of a protest from the back of the hall to the effect that a motion, thrice read to the meeting, had nevertheless not been heard by many members when the vote was taken. The immediate result was to allow the main body of representatives to hear those addressing them, but the speakers became forthwith wholly inaudible to the press and the platform and the front rows of the audience. When this had been adjusted Dr. Buist stood up to raise a diverting point of order—namely, to inform the Chairman that every "aside" upon the platform had become clearly audible at the back of the hall! Apart from such minor embarrassments, it appeared that the introduction of this device enabled the Representative Body to follow with closer attention the conduct of its business.

Luncheon to Oversea Representatives.

On the first day of the Annual Representative Meeting the officers of the Association and the Chairmen of the Organization and Dominions Committees gave a luncheon party at the Victoria Hotel to welcome the representatives of oversea Branches and Divisions who are taking part in the proceedings at Nottingham. Dr. H. B. Brackenbury, Chairman of the Representative Body, who presided, said how glad he and his colleagues were to have this opportunity of making the personal acquaintance of oversea members. Their affairs were constantly before the Association at home, and formed a most interesting part of its work. The presence of representatives from distant lands helped towards that consolidation of the profession in every part of the Empire which the Association had at heart. Dr. K. B. Alexander (South Africa), in a few words of acknowledgement, spoke of the great value of personal meetings and discussions, and quoted the success of Dr. Cox's visit to South Africa as a case in point. Lieut.-Colonel F. F. Elwes (South India and Madras) said attendance at the Annual Meeting brought home to those from abroad the fact that they belonged to one body which was looking after its members' interests everywhere. Dr. R. J. Bull (Victoria) brought a message of loyalty and goodwill from Australia, and added that his own reception at headquarters and in Nottingham made him feel among friends. The brief and informal proceedings—an agreeable interlude between two busy sessions—ended with the toast of "Our Hosts," proposed by Dr. P. J. Chissell (Ceylon). The joint hosts, with Dr. Brackenbury, were Sir Robert Bolam (Chairman of Council), Mr. Bishop Harman (Treasurer), Dr. Morton Mackenzie (Chairman of the Organization Committee), and Sir Jenner Verrall (Chairman of the Dominions Committee). The other oversea guests present were Dr. H. W. Dyke (Orange Free State), Dr. G. S. Woodman (Mesopotamia), Professor J. W. C. Gunn and Dr. E. A. Seale (Cape of Good Hope), Dr. G. B. McHutchinson (Malaya), Dr. E. F. Hatton (Grenada), and Dr. Gregory Sprott (Tasmania). The company also included the President-Elect, Mr. R. G. Hogarth, and the Honorary Local General Secretary, Mr. A. M. Webber; Dr. J. A. Macdonald, Dr. J. Barcroft Anderson, and Dr. F. J. Gomez; together with the senior officials of the Association, and the Solicitor, Mr. Hempson.

The Church Service.

A special service for the British Medical Association was held at St. Mary's Parish Church, Nottingham, on Tuesday afternoon, when the President, the Chairmen of Council and of Representative Meetings, the Treasurer, and other officers and a very large body of members attended, wearing their academic gowns. There was also a civic procession, headed by the Mayor and the Sheriff of Nottingham. The service was conducted by the Rev. Thomas Field, D.D., vicar of Nottingham, and the sermon was preached by the Bishop of Manchester (the Right Rev. W. Temple, D.D.). The sermon was on the theme that the lower forms of existence had their meaning just in the degree in which they became vehicles for the higher forms. The preacher said that the Divine method of creation had always been, in his conception, to introduce the higher in order to develop to its full capacities the lower, and to reveal within it new elements. The trend of modern knowledge, in his view, made easier and not more difficult the intellectual acceptance of the essence of the old traditions. It was supremely difficult, he said, for anyone of his own generation (the bishop is still in his forties) to understand what all the trouble over evolution in the last century had been about, or was about now. No doubt that was partly because he was brought up in a home where the new thoughts were already familiar, and so his own early training was adapted to them; but he had great difficulty in thinking himself into the position of those to whom such ideas as evolution came as a shock. None the less, it did seem quite plain to him that the essential features of Christian doctrine fitted in with the newer scheme of thought far more coherently than they did with

future, through a steady extension of the principle of the paying ward, and even of the paying hospital, for the use of the patient who pays according to his means. The interests of the middle classes deserve attention no less than those of any other class, and he does not think that the charitable donor is likely to object to middle-class patients receiving a share of the fruits of his charity. "He had a much more valid grievance against those who abused the freedom of the hospital and never contributed a penny to its funds." In his view of hospital development the President, we think, gives correct expression to the growing volume of opinion among all classes of the community, a fact that is illustrated by the recent paper by Mr. Sanctuary, the administrator of the Radcliffe Infirmary at Oxford, read before the Oxford Division of the British Medical Association, and reported elsewhere in this issue (p. 170). Mr. Sanctuary took an even bolder line: he urged that the voluntary hospitals should be available for all—the poor, the middle classes, and the rich alike, each paying according to their several abilities, and the doctor receiving the remuneration due for his services.

There is much matter for thought in this Presidential Address. It is eloquent because it is thought-compelling, and we believe also because it is of the quality of fruitful thought in that it stirs to action.

ANNUAL MEETING NOTES.

THE ANNUAL REPRESENTATIVE MEETING.

Friday, July 16th.

FULL reports of the first two days' proceedings of the Representative Body will be found in this week's SUPPLEMENT. The short notes that follow are meant to serve merely as an informal guide to some of the discussions and decisions.

The Representative Body met on Friday, July 16th, with what promised to be a "record" attendance, and with an agenda which, on the face of it, was probably the least controversial presented to the series of meetings held since the war. Accordingly, the debates throughout the day were somewhat discursive, and less progress than might have been hoped for was made by the evening. This is not to say that the matters discussed lacked interest, but merely that they provoked little controversy. The outstanding feature of the day was, of course, the report by the Chairman of the Organization Committee on the organization of the profession in South Africa, and the adoption by acclamation of the resolutions which set the final seal of approval on the settlement negotiated by Dr. Cox during his South African tour. Throughout Dr. Morton Mackenzie's analysis of the position as it had developed last year and his summing up of the steps by which obstacles once apparently insuperable have been surmounted, and throughout the speeches of the South African representatives and Dr. Cox's reply to the warm congratulations addressed to him, there was manifest a strong sense of the reality of the difficulties to be met, the danger of failure, and the solidity of the success achieved. But there was also a full appreciation of the fact that it was the spirit of true statesmanship displayed by the South African leaders that has rendered possible professional unity in South Africa under the auspices of the newly formed body to be known as "The Medical Association of South Africa (British Medical Association)." In the cause of that unity, and in the public interest, they, in the words of Dr. Morton Mackenzie, have given freely and as freely recognized the concessions made by the Association at home. It was a happy augury for the future that the report was made under the flag presented by the Witwatersrand Branch for display in the Great Hall of the House of the Association. Apart from the presentation of the South African report the session was hardly eventful. The amendments to standing orders governing procedure at the present meeting were adopted as a matter of course, and it may be hoped that some way of regulating the reservation of seats in a manner which will appeal to the collective sense of the representatives will be found by the Agenda Committee before next year. On the Chairman of Council's presentation of the several reports and memorandums before the meeting, the main items of interest emerging were the list of gifts presented to the Association during the past year, and the honorary membership conferred by the meeting on Dr. Hall-Edwards. Under the heading of finance there was enough discussion to indicate a healthy interest in the subject, but no substantial criticism was advanced. The discussion did, however, serve to clear the minds of representatives as to the extent of the Association's financial contributions towards the advancement of science, and the means by which it seeks to serve this end. The chief interest centred in the cordial expression of appreciation of the outstanding services rendered by the Building Subcommittee, both in regard to the Association's new headquarters and the disposal of its former house. It was only with a portion of the Science Committee's report that a point of sharp difference of opinion, or perhaps rather of sentiment, was reached. Here there was real danger that the efficacy of the scale for non-professorial teachers and laboratory and research workers might be destroyed by motions designed to meet the hard cases of struggling institutions. The afternoon session opened with a sharp skirmish between those who, in the words of a critic, were either not trying to be heard or not trying to hear. As the outcome of a debate on the constitution of the standing Charities Committee the principle of territorial representation received general approval. A suggestion from Dr. Fothergill that in order to save time he should deal with two motions from Brighton together was very well received—possibly as a hint for others to follow. The discussion of those motions showed how often it may happen that the same idea arises both centrally and locally, and illustrated once again the activity of Brighton in exploring new fields of utility for the Association—in the one case co-operation with other professional societies in this country, in the other with foreign medical societies. The session closed with an unexpected outburst of feeling elicited by the old question of the length of time for which a member may retain books borrowed from the library. The solution accepted on the suggestion of the Chairman of Council appeared to the meeting generally to be both reasonable and practicable.

Saturday, July 17th.

The Representative Body met on Saturday with the prospect of a short session, though the agenda included at least three matters in which lay as well as professional opinion had been considerably exercised of recent years—namely, hospital policy, psycho-analysis, and the constitution and functions of the General Medical Council. Under all three heads definition of the points at issue and elucidation of the facts of the case, as opposed to surmises regarding the position, formed probably the most important work accomplished. The resolution on the treatment of accidents in hospitals was accepted as an uncontroversial application of the existing policy of the Association; but that relating to hospital case sheets, involving on the one hand ethical considerations, and on the other the danger of impairing practical efficiency by the rigidity of definition, was more debatable. Here the recommendation of Council was accepted as a necessary safeguard of a position open to attack, and as the nearest approximation to maintaining the relationship of doctor and patient as it exists

in which women usually present themselves for treatment—that is to say, in conditions not too far advanced to render operation with a view to eradication hopeless. By "best" conditions is to be understood those of a patient whose cancer is strictly localized, does not involve the skin, and has not affected either axillary or supraclavicular glands. No. 34 is a report on the late results of operation for cancer of the breast, and shows the after-histories of women operated upon for primary cancer of the breast in Leeds General Infirmary and the Hospital for Women and Children during the years 1910-13 and 1919-21. One of the general conclusions is that if the complete operation is undertaken while the growth is still confined to the breast it is rare for the patient to die of the disease within ten years. If the growth has ceased to be local it is rare for a patient to be alive ten years after operation. While the growth was still local 90.1 patients were alive ten years after operation. When the axillary glands were involved 91.3 were dead within ten years of operation, and of more advanced cases 94.4 were dead within ten years of operation. This is well summarized in the epigrammatic statement that the "survival rate is inverted as soon as the cancer has passed beyond the breast."

FORECASTING EPIDEMIC SMALL-POX.

THE Medical Research Council has just issued[1] an interesting study of Indian medical statistics by Sir Leonard Rogers. In a preliminary investigation he had ascertained that in the North-Western area major epidemics of small-pox followed failure of the south-west monsoon rains; but when the whole peninsula was considered it appeared that the actual amount of rain was not the determining factor. Thus, while in the seven provinces which receive their main supply of rain during the south-west monsoon from June to October there is, during this period, a great fall in the incidence of small-pox, yet the north-east monsoon—which is the chief source of supply in the south-eastern parts of Madras—is not associated with a decline of mortality from small-pox in that area. Detailed investigations make it probable that a more reliable indication of coming epidemics is given by the absolute humidity of the atmosphere. With this clue the explanation of the anomaly in Madras is reached. There "the north-east monsoon rains of October to December are seen to occur at a time of falling monthly mean temperature; they are consequently accompanied by a falling absolute humidity, especially during the rains of November and December, which we have seen are followed by a rapid rise in the incidence of the disease." This thesis is supported by an examination of all the available data, illustrated by numerous charts and tables. Cases naturally occur when the correspondence is not good, but these may be explained. For instance, in the Central Provinces there was an exceptional prevalence of small-pox in 1895, although the rains were good and the humidity high. But this followed a period of five years in which the small-pox rate was low and vaccination neglected, so that an accumulation of susceptible persons might be the explanation. The method of correlation shows in each case a negative correlation between the absolute humidity of one year and the small-pox rate of the following year. In only two of the provinces, however, are the values, taken alone, significant from the statistical point of view; but, as Sir Leonard Rogers notes, the epidemic often begins in the year before that containing its maximum, so that the data are not very suitable for summary presentation by means of single constants. The question is raised whether this means of forecasting could be used outside of India, and it is suggested that in other countries with definite rainy seasons and high temperatures the criterion might be useful. He indicates, among other districts, Eastern Queensland, Central and much of South America, and the Southern United States as suitable for study. For the reasons given this method is not, perhaps, likely to be of much service to epidemiologists in this small island, but its value in many continental areas may be great. If there was a reasonably trustworthy means of prediction a good deal might be done—for instance, by an intensive vaccination campaign—to reduce the mortality of the epidemic. Hence Sir Leonard Rogers has performed a valuable service in bringing this method to the notice of epidemiologists, and the value of his report is enhanced by the publication of the actual data. Most readers will no doubt be content to read the text and examine the diagrams, but the few who may wish to try refinements or modifications of the author's process will have the means of doing so.

[1] *Small-pox and Climate in India: Forecasting of Epidemics.* By Sir Leonard Rogers, C.I.E., M.D., F.R.C.P., F.R.S. (Medical Research Council, Special Report Series No. 105; pp. 22 + tables and diagrams.) 1926. H.M. Stationery Office. Price 2s. net.

IMPERIAL CO-ORDINATION OF MEDICAL RESEARCH.

AMONG the addresses to the Congress of the Universities of the Empire held at Cambridge last week, that by the director of the London School of Hygiene and Tropical Medicine had a special appeal to the medical profession at home and abroad. Dr. Balfour said that at present much time was wasted, energy dissipated, and money thrown away owing to the fact that in the great and important domain of tropical medicine men were to a large extent working in watertight compartments. While it was true that such publications as the *Tropical Diseases Bulletin* served to keep workers conversant with the researches carried out by others, this only partially met the difficulties. Some organization was required to lay down lines of research work (which need not appear to be immediately profitable), follow up what had been done, and decide not only what results were worth recording, but how best they could be recorded. At the moment India alone had done anything in this direction. There a Scientific Advisory Board met several times each year to consider the medical and sanitary research work which was being done and to discuss future lines of progress. The Indian Research Fund, which controlled the monetary resources, did not allot funds without obtaining the opinion of the board. There was no link, however, between the board and any institution in this country, and the want was badly felt. Dr. Balfour suggested that the Indian board should be in touch with some body such as the Medical Research Council. That Council, which had accomplished so much in this country, had not yet, to any great degree, extended its activities to questions of tropical import—from its constitution it was not at present in a position to deal with them unless they were common to both tropical and temperate climes. It was curious that while the Indian board worked in co-operation with the League of Nations it was not officially in touch with the scientific activities in the mother country. Dr. Balfour thought it essential that there should be in London some central organization which would consider and put forward suggestions for exploration, which would keep in touch with and encourage the workers themselves, which would collate and disseminate information, and which would arrange for the selection and training of personnel. He saw no insurmountable difficulties in such a scheme, especially if the Medical Research Council became the nucleus. A comparatively small expansion of its staff and resources would enable it to serve as such a nucleus and to keep in close touch with the Colonial and India Offices and with the Foreign Office (under whose control the Anglo-Egyptian Sudan came). The recent appointment of Dr. A. T. Stanton as chief medical adviser to the Secretary of State for the Colonies was a first step in the right direction, and if there were

the more static view which was prevalent in the days of our grandfathers. Speaking of the origin of evil, the bishop said that this question, however curious, was singularly unimportant. It had very little practical bearing on the really important question—not how evil came, but why it was here and what we were going to do now it was here. It was clear that in the Christian view, and, he thought, in what might be broadly termed the historico-scientific view, the struggle with evil was the main element in the significance of life and of reality; and that again was at the heart of Christian conviction. In the closing passages of his sermon the preacher spoke of the very close and intimate relation between those who were primarily concerned with healing evil in its bodily form, which was called disease, and evil in its spiritual form, which was called sin. Both Churchmen and medical men were engaged in the same task and struggle. The closer they could work together the better it would be. The stronger the spiritual life among those concerned with physical healing, the better would it be alike for themselves and for those who profited from their ministrations. He had been specially asked to call attention to the Guild of St. Luke, which existed to band together the members of the medical profession according to the rites of the Church of England. "But whether by that means or other means, just as we need your support on the Church's side if we are not to fail miserably in all that we set our hands to do, so you need, not only for the health of your individual souls, but for the full efficacy of your professional work, the heightening of your own spiritual powers to the utmost by the opening of your hearts to receive the love of God, and by the making of your spirits the vehicle of His Holy Spirit." The offertory was on behalf of British Medical Association charities.

"THE BOOK OF NOTTINGHAM."

A beautiful volume, *The Book of Nottingham*, resembling in size and style that issued by Bath last year, has been produced by the Printing and Publishing Committee at Nottingham, and a copy has been given to every member attending the present Annual Meeting. This volume, like its predecessors, is not intended to serve as a guide-book. Its purpose is to make the reader acquainted with the history and natural features of Nottingham and Nottinghamshire from the earliest times to the present day, and to tell him something of the staple industries of the town. A large part of the text is from the pen of Mr. E. L. Guilford, M.A., to whom our readers are indebted for most of the descriptive and historical notes on Nottingham and its neighbourhood which have appeared in recent months in the BRITISH MEDICAL JOURNAL. Mr. Guilford's intimate knowledge of local history and his literary skill have been placed freely at the disposal of the committee. His articles are supplemented by a synopsis of the varied scenery and geology of the country around Nottingham, by Dr. W. Alfred Richardson, lecturer in petrology, and Mr. Sydney G. Clift, lecturer in geology, at University College, Nottingham. The book opens with an outline of the history of the town, and in a series of notes on modern Nottingham particular attention is paid to the hospitals and to University College. It is a pity, as the preface remarks, that its growth from a small agricultural community of the Middle Ages to a large commercial and industrial centre has only been accomplished by the covering up of ancient landmarks and ruthless sacrifice of the picturesque for the utilitarian. "Gone are the narrow streets with overhanging gabled houses, and the old gates that marked the confines of this ancient city." Nevertheless, the busy Nottingham of to-day has a good deal to attract the antiquary; and the surrounding country abounds with famous houses, monastic remains, and interesting towns and villages, many of which are here described and illustrated. In a chapter headed "Famous Men of Nottinghamshire," the exploits of Robin Hood and of the Fools of Gotham are treated in a spirit of becoming levity, and a sketch is given of John of Arderne, the father of English surgery, who practised at Newark from 1349 to 1370, and whose career has been made familiar through the writings of Sir D'Arcy Power. Another medical name honoured in the neighbourhood is that of the physiologist, Marshall Hall, M.D., F.R.S., who was born at Basford in 1790, and practised as a physician in Nottingham from 1817 to 1826. The volume is excellently printed in clear large type on good paper, and the many illustrations, reproduced from drawings, photographs, plans, and old prints, add greatly to its interest and value. The frontispiece is from a portrait of the President, Mr. R. G. Hogarth, and there is a beautiful reproduction in colours of the characteristic landscape by Arnesby Brown, R.A., "May Morning, Nottingham," exhibited four years ago at the Royal Academy; the original, in the possession of the corporation, hangs in the Nottingham Museum and Art Gallery. The chapter describing the leading trades and industries of Nottingham includes, of course, sections on hosiery and lace making, and on the manufactories of the firms of Boots and Player; there is also a note, particularly interesting to us, on the development of modern methods of printing. Everyone knows that the town is famous for its lace, its tobacco, and its chemicals, but in recent times it has become an important centre also of the printing trade, and this volume is a good example of what can be done by a Nottingham firm of printers. Indeed, the chairman and the secretary of the Printing and Publishing Committee—Dr. Eric Snell and Dr. N. P. R. Galloway—write altogether too modestly in their preface about the results of their labours. *The Book of Nottingham* will be valued as a delightful souvenir by everyone who has taken part in the ninety-fourth Annual Meeting of the British Medical Association.

THE STUDY OF CANCER.

THE Departmental Committee of the Ministry of Health appointed in 1923 to consider available information with regard to the causation, prevalence, and treatment of cancer has issued two more reports.[1] No. 33 is by Dr. Major Greenwood, and deals with the natural duration of cancer. The data analysed, with all Dr. Major Greenwood's customary care and insight, were obtained from several hospitals, and included 4,238 cases relating to seven primary sites; they are utilized in various ways, but principally to ascertain the natural duration, in order to be able to measure the effects of treatment. Any numerical measure of cure must, Dr. Greenwood points out, take account of three quantities: (1) the average duration of life of a person, of the same age as the patient, but not known to be suffering from the disease; (2) the average duration of life of a person suffering from the disease and left untreated; (3) the average duration of life of a person suffering from the disease and treated in the manner the value of which it is desired to test. The case of cancer of the breast is taken as an example, and the assumptions which must be made are set out. It is shown that the normal expectation of life of a woman aged 55 is 18.87 years. The expectation of life of a woman with untreated cancer of the breast is 3.25 years; that of a woman operated upon under "average" conditions is 5.74 years, and of a woman operated on under the best conditions 12.93 years. By "average" conditions are to be understood conditions

[1] Ministry of Health. Reports on Public Health and Medical Subjects. No. 33: *The Natural Duration of Cancer*, by Dr. Major Greenwood; price 9d. No. 34: *The Late Results of Operation for Cancer of the Breast (Leeds)*; price 6d. H.M. Stationery Office, London, Manchester, Cardiff, and Edinburgh.

THE CONGRESS OF CHEMISTS IN LONDON.

THE annual meeting of the Society of Chemical Industry in London this week was enlarged into a congress of chemists. On Monday, July 19th, at a meeting of the Institution of Chemical Engineers, the EARL OF BALFOUR was presented with the Messel medal, and delivered the Messel memorial lecture, and an exhibition of British chemical plant at the Central Hall, Westminster, was opened by Sir Max Muspratt, president of the Federation of British Industries. On Tuesday morning, July 20th, the annual meeting of the Society of Chemical Industry was held, and the retiring president, Mr. W. J. U. WOOLCOCK, delivered an address on the present position of the society. He pointed out that through co-operation it had became possible, for the first time in the society's history, to make the annual meeting a nucleus of a congress of chemists, representative of sixteen scientific and technical associations. He hoped also that in time the electrical engineers would be associated with their society. Co-operation had led to the formation of a bureau of British chemical abstracts, and by this means duplication in publication was avoided. The Chemical Society published abstracts in pure chemistry, and the Society of Chemical Industry those in applied chemistry. He called attention also to the formation of a fuel section of the society, for matters relating to fuel research and practice.

Scientific and Industrial Problems of Hormones.

On the same day the London section of the Society of Chemical Industry held a joint meeting with the Biochemical Society. The chair was taken by the Rt. Hon. Sir ALFRED MOND, and the subject for discussion was the scientific and industrial problems presented by the hormones—the natural drugs of the body. The first paper was read by Dr. H. H. DALE, F.R.S., on the experimental study and the use of hormones. Dr. Dale described the history of adrenaline from the time of Dr. George Oliver's experiments, and its isolation by Professor Abel in America, to the researches into its structure by Dr. Jowett. The Cambridge school of physiologists found that adrenaline might be said to produce all the vascular and visceral reactions which accompanied, and, according to one school of psychology, provided the basis for, the emotions of anger, excitement, and fright. There was evidence that the suprarenal glands supplemented the normal sympathetic control of the viscera when the organism prepared for combat or flight; while traces of this hormone in the blood probably helped to maintain a healthy tone and readiness of reaction in the small peripheral blood vessels. Apart from asthma, however, the chief condition for which adrenaline was used was the local production of bloodless mucous membranes for surgical purposes. From the chemical and manufacturing point of view, said Dr. Dale, adrenaline already furnished a complete story, if not a closed chapter. For the biochemist the fascinating problem of its origin in the body still remained. But of the active principles of the cortex of the suprarenal gland nothing was known; it still presented a problem to biochemical research, and ultimately to biochemical manufacture.

From the thyroid gland Kendall, in America, about ten years ago, isolated the active iodine-containing hormone thyroxine, which could now be prepared in practicable quantities, so that there was no doubt that sooner or later it would be produced by artificial synthesis. The active principles of the posterior lobe of the pituitary body, of insulin from the pancreas, and of secretin from the intestinal mucous membrane, were protein derivatives, or closely associated with such derivatives, and could not be separated from them without losing their specific activities. Consequently the manufacturer had to obtain his raw material from the abattoir in a state of absolute freshness. But the stability of the principles, once obtained, was considerable, if their reaction was weakly acid. Pituitary extract was invaluable in obstetrics. If the manufacturer obtained absolutely fresh material, simple extraction by boiling acidulated water gave an extract of high potency, and, at acid reaction, of great stability. But the gland was extraordinarily sensitive to antilytic change or bacterial action, so that the variations in activity of samples of the extract had been something of a scandal to scientific manufacture, and a danger to life. If ever the principles were to be isolated for examination, it could only be by the close co-operation between industry and biochemical skill. The right method of extraction for insulin took many years to discover, but Professor Abel claimed that he had now isolated insulin as a pure crystalline substance. Evidence was now accumulating that the maintenance of a steady percentage of free glucose in the blood was due to a delicate balance between the action of insulin and the antagonistic effects of adrenaline, thyroxine, and pituitrin. Insulin was an example of what could be effected by co-operation between the scientifically organized factory and the academic laboratory; and the scientific industry of this country had reason to be proud of the fact that, within eighteen months from its introduction, production had increased so greatly that a balance was available for export, and the original price was reduced to less than one-eleventh of that originally required. The great need, however, was biological standardization. Even with adrenaline and thyroxine it was doubtful whether adequate chemical criteria of purity were yet available. It was possible even for the conscientious manufacturer to make, by apparently identical methods, preparations with a wide variety of activities, in the absence of physiological control. But the term "biological standardization" had too often been used, to its inevitable discredit, merely to represent the effort of a manufacturer to ensure that different issues of his own product had a rough uniformity of action. The activity of these potent preparations must be defined in, possibly empirical, but internationally valid units.

Dr. H. W. DUDLEY dealt with the difficulties of isolating in a pure condition the principles of pituitary gland and of insulin. The posterior lobe of the pituitary gland in oxen was so small that to yield a kilogram of the dried material 10,000 oxen were required, and probably less than 0.1 per cent. of the dried tissue represented active principles. With insulin also probably the major portion of the preparations was inert material. The chemical investigation of these hormones encountered difficulties equally formidable on account of their complexity and instability. No chemical tests for their presence being known, they must, after each attempted step in their purification, be recovered in a form suitable for a quantitative physiological test, while their stability was such that none but the mildest chemical manipulations caused their destruction. In the case of the pituitary hormones the preparation of crystalline salts had been reported, but in no instance had the observations been confirmed. It was now possible to concentrate the entire insulin activity of the pancreas into a very small bulk, which was the insulin of modern chemical technology; but whether the crystalline substance isolated by Professor Abel—and which he stated had a physiological activity slightly greater than that of the best commercial preparations—was the hormone in chemically pure form could not be determined until further evidence was provided.

Mr. FRANCIS H. CARR said that, with the help of the physiologist, the technical difficulties of manufacturing hormones, though somewhat exceptional, might be compared to those encountered in other departments of fine chemical manufacture. Beginning in the slaughterhouse, the raw material (the glands) was laid out in thin layers in cold, dried air, and was quickly frozen. But, even when frozen, adverse changes were not entirely inhibited, so that the frozen glands must be worked up as promptly as possible. Crude extracts containing insulin were stabilized at normal temperatures by bringing the solution to a pronounced acid condition, and removing enzymes by filtration. Continuous treatment of small amounts was better than treating larger quantities in intermittent batches. Grinding of glands should be carried out in two stages, between which acid and alcohol should be incorporated to make the mixture stable. In the stage of concentration low temperature was again of importance, the destruction of insulin being a function of the factor temperature multiplied by time. The ultimate purification of high-

attached to him a number of liaison officers it would become possible to look forward to a group of medical officers at the Colonial Office which, in close touch with the Imperial Research Council (or whatever it might be called), would be of the greatest value in supplying expert and up-to-date information. Another hopeful development, Dr. Balfour said, was the recent establishment of the Committee of Civil Research—a committee which might be, at least in part, incorporated with the council which he suggested. In each of the African colonies there should be a department of research, just as there was a department of public works, which would be concerned with all the branches of science—medical, veterinary, agriculture, forestry, botanical, geological, and so forth. The necessary funds might be obtained by grouping several colonies together—a scheme specially feasible in West Africa, the two Rhodesias, and the Sudan and Uganda. The Department of Research, in order to steer free of departmental jealousies, might well be placed under such a neutral department as that of education, if it were quite impossible for it to stand on its own legs. This plan had already been attempted with complete success by Sir James Currie in the Sudan. Education itself would benefit immensely by being linked up with all the research activities of those lands where it was endeavouring to make the native a wiser, better, and healthier citizen. The new London School of Hygiene and Tropical Medicine could, Dr. Balfour concluded, play an important part in co-ordinating and assisting medical and hygienic research throughout the empire, and might be one of the weapons by which the Central Research Council in London would wage an empire-wide war on ignorance and disease.

CHINESE HOSPITAL, SHANGHAI.

THE Chinese Hospital, Shantung Road, Shanghai, was founded eighty years ago by Dr. William Lockhart. It is staffed by members of the London Missionary Society, and controlled by British trustees. Recently the hospital has received, under the will of the late Mr. Henry Lester, an old resident in Shanghai, the magnificent gift of £350,000 in money and land. With these funds it is proposed to reconstruct the hospital on modern lines, to establish outside the city of Shanghai a home for convalescing and other patients, and to form an endowment fund for the institution. The report of the hospital for the year 1925, by Dr. Cecil J. Davenport and some of his subordinates, gives an interesting account of the work of the institution during the difficult period of the strike. In consequence of the boycott patients left the wards and attendances in the out-patient clinics fell off markedly. At times the whole Chinese staff threatened to resign, but better counsels in most cases prevailed. One resident Chinese doctor departed, leaving a picture of skulls and daggers on his bedroom wall; and four senior assistants and nurses left to joint in the fray. The rest of the staff remained faithful to their posts. They were kept busy attending to persons who were wounded in the riots. In the report by Dr. Agnes Towers on the women's hospital a big drop in the in-patient admissions for 1925 is attributed partly to what must seem a curious cause to readers in this country. The "women opium suicides" were sent to a different part of the hospital. It is satisfactory to learn, however, that the suicide wave seems on the wane, fewer cases of suicide from swallowing match-heads having been seen than in former years. This form of suicide, says Dr. Towers, is very fatal, as the patients do not reach the hospital until the poison has had time to get thoroughly absorbed. In the men's wards nursing is done by young male nurses, assisted by coolies for sweeping and cleaning. The male nurse is apparently not easy to discipline, but on the whole is fairly satisfactory considering that he is a man. The funds of the hospital show a slight balance on the right side, and with the generous gift of Mr. Lester its future should be assured.

A GREAT SURGEON'S COUNTRY SIDE.

IN addition to being a scientific surgeon in the first flight Sir Rickman Godlee was a many-sided man, though from innate modesty and reserve many of his accomplishments were hidden from all but his close friends. He was a linguist, a biographer, an artist, a poet, a botanist, an ornithologist, and more, as Sir George Newman points out in a sympathetic memorial sketch, all too short, which is attached to *A Village on the Thames: Whitchurch, Yesterday and To-day*,[1] a collection of charming essays written, without any thought of further publication, for the parish magazine, and now given to a wider audience by Lady Godlee, who supplies their history in a pleasing foreword. These fifty-two articles, the last three of which were ready for the press at the time of his sudden death on April 20th, 1925, are redolent of the country and the peaceful waters of the Thames, and reflect the wide interests of the few years of retirement after a busy professional life. They show an ideal realization of that desire to retire which so many men have but so comparatively few achieve. The first eight tell the story of the surroundings of Whitchurch in accounts of "The ancient Thames," "Locks and weirs," and "Ancient earthworks," while among the others there are many of a wider scope on birds, beasts, and insects, place names and surnames, coaches and railways, the last bringing into prominence the seclusion of his home, where "we Whitchurch folk hear indeed an occasional whistle and the distant roar of the trains when the wind is south-west, but even from the top of the hill it is hard to catch a glimpse of them until they are out of sight!" Charmingly written and well illustrated, especially with a photogravure of this smiling, high-minded man sitting with his dog on a wheelbarrow in his garden, these essays are just the companions to take on a holiday.

THE ROSS INSTITUTE AND HOSPITAL FOR TROPICAL DISEASES.

ON July 15th the Prince of Wales opened the Ross Institute and Hospital for Tropical Diseases at Putney Heath, of the origin and nature of which we gave an account last week (p. 129). The Prince of Wales was received by the Duchess of Portland, president of the institute, and by Sir Charles McLeod, the chairman, who presented an address and the key of the building. The Prince of Wales, in reply, said that malaria, which had been one of the most deadly and elusive of tropical diseases, was now certain to be defeated, thanks to the achievements of Sir Ronald Ross. In the Sir Alfred Jones Laboratory in Sierra Leone the Prince had seen, only a few months ago, the remarkable progress which had been made in the campaign. No single discovery in recent times had earned the gratitude of so many human beings as the discovery made in India in 1897 by Sir Ronald Ross, who, as had been well said, "made one-third of the world inhabitable." With the sincere hope that further public support for endowment would be forthcoming, the Prince of Wales declared the institute and hospital open. After a dedicatory prayer by the Bishop of Southwark, a vote of thanks to the Prince was proposed by the Duchess of Portland and seconded by Sir Ronald Ross. The guests attending the ceremony were permitted subsequently to view the grounds of the hospital.

[1] *A Village on the Thames: Whitchurch, Yesterday and To-day.* By Sir Rickman J. Godlee, Bt., K.C.V.O., M.S., F.R.C.S. London: George Allen and Unwin, Ltd. 1926. (Extra post 8vo, pp 283; photogravure frontispiece, 19 other illustrations, and 2 maps. 7s. 6d. net.)

experience. Dr. Potts insisted that it was desirable that those who practised psycho-analysis should themselves have been subjected to the process by another. If those who had not entered fully into it worked on this method it was liable to bring discredit on it. It was not a form of treatment for acute mental disease; both psycho-analysis and psychological analysis were special kinds of education, which prevented the recurrence or development of mental disorder which otherwise seemed inevitable. This process by no means disregarded physical ailments in mental disease.

Dr. WILLIAM BROWN (Oxford) agreed with Dr. Potts in a general way, but insisted that, whether the method of Freud or that of Jung were followed, it was the same in quality. He believed that Jung's insistence on the influence of present factors would not be denied by Freud. He gave a sketch of Freud's most recent work, on the general libido theory, which was an attempt to explain difficulties of evolution in the moral life in terms of libido distribution. In psycho-analysis dissociations of one kind and another were overcome, while the unsatisfactory nature of his philosophy was revealed to the patient, thus helping him to find another philosophy of life. He agreed that all who intended to specialize in this branch should themselves have been analysed.

Dr. A. WOHLGEMUTH approached the matter from that of pure science, having no regard to the therapeutic value of the method or otherwise. He objected to the term "the unconscious mind," as it was no more than a process. It was not correct to credit Freud with the discovery of the unconscious mind. He contended that much of the result claimed by psycho-analysis was due to adroit suggestion on the part of the analyser.

Dr. M. HAMBLIN SMITH pleaded for an unprejudiced examination of the claims of psycho-analysis. Psychology was the science which taught man about himself, but it dealt shrewd blows at his self-esteem. Freud's hypothesis went far beyond the limits of any system of therapeutics; it dealt with the normal as well as the pathological. He knew people who had been freed, by psycho-analysis, of phobias and of obsessive practices.

Dr. E. MAPOTHER said the great question was whether results were obtained by psycho-analysis which were not procurable by other means of treatment. After twenty years of experience and watching he remained in doubt on the point. At the present time he believed that truly free association was hardly ever obtainable; patients' associations were largely directed by what was obviously expected of them. What was most needed was an unprejudiced record of changes in patients seen before and after the process by people who were not professed and practising psycho-analysts.

Dr. CRICHTON MILLER also examined the subject in some detail, and declared his belief that the method was coming into use more and more.

Professor G. M. ROBERTSON said he regarded Freud as one of the greatest psychologists and one of the greatest discoverers the world had produced; no man could strike out an entirely new line without making mistakes. He spoke, not as an expert psycho-analyst, but as one who tried to take a detached view.

Dr. M. A. ARCHDALE said he preferred intentionally suggestive treatment. He asked whether, when the psycho-analyst obtained a cure, it was always because he had discovered the patient's disturbing complexes.

Dr. T. A. ROSS took the same view on the subject as Professor Robertson. He objected to the dictum that only those should carry out psycho-analysis who had themselves been subjected to it.

Dr. POTTS, in a brief reply, dealt with the points raised.

THE ANNUAL DINNER.

The annual dinner took place at the Victoria Hotel, Northumberland Avenue, when a large number of distinguished people were present to support the President.

The toast of His Majesty the King having been loyally pledged, Dr. J. G. SOUTAR proposed "The London County Council," coupling with it the name of Sir George Hume, J.P., M.P., the chairman of the L.C.C. He said the functions and activities of that body were so numerous and varied that they made appeal to every special interest. He pictured how the subject might be dealt with by a speaker from a number of special points of view—that of the historian, the sanitary engineer, the educationist, the architect. However viewed, those activities could be interpreted as a desire to give effect to the teachings of medical science. He referred in feeling terms to the loss the association and the profession had sustained by the death of Sir Frederick Mott, and to the great work he did in the special sphere covered by that body. He believed the beneficial results brought about by the Maudsley Hospital, in the founding of which Sir Frederick took an active part, would result in legislation being brought forward. He hoped the L.C.C. would continue to be fellow labourers with the profession for the still further improvement of the people.

Sir GEORGE HUME, in the course of his reply, said he had found, in his present position, that it was safer to listen than to speak, though he was glad to report that since the Council had entered into the occupation of its new home the relations of its members to one another had been much more harmonious than in former times. He was proud that the L.C.C. had on its staff men whose achievements made them known over the whole world. He concluded by congratulating the association on having been granted a Royal Charter.

Dr. R. PERCY SMITH submitted the toast of "The Universities and Royal Colleges," and, after speaking of the various ancient and modern universities, referred to the granting by several of them of the diploma in psychological medicine.

Professor G. M. ROBERTSON, P.R.C.P.Ed., in responding, gave an historical survey of the university teaching of psychiatry from 1923 onwards, and mentioned incidentally the establishment by William Tuke of The Retreat at York in March, 1792, six days after a requisition had been lodged by Admiral Duncan for a mental hospital at Morningside, Edinburgh.

Dr. WILLIAM BROWN, Wilde reader in psychology, Oxford, also replied. He referred to a certain university where it was not regarded as good form to be seen working, hence it was usual for men to read hard in the long vacation—that was why it was made so long. But the matter was quite different when one came to London University, where one needed an iron nerve to get through the examinations. He pointed out the great service to a man of having a system of philosophy to guide him, and discouraged the idea that any line of research and endeavour could be entirely "academic."

Dr. BEDFORD PIERCE proposed "The Royal Society of Medicine and the British Medical Association" in terms of appreciation of the work those bodies were doing for the benefit of the profession. He blended this sentiment with that of sympathy for those responsible for carrying on that work, as they must have great difficulty sometimes in satisfying everybody. He counselled every doctor to read carefully the *Handbook for Recently Qualified Medical Practitioners*. He had a special word of praise for the editors of the medical journals and the way in which they carried out their duties, though he thought there were few articles published in them which would not be the better for being cut down to half, or less, of their length.

Sir STCLAIR THOMSON, for the Royal Society of Medicine, kept the company in continual merriment by his narratives and topical sallies.

Sir DAWSON WILLIAMS, replying for the British Medical Association and its JOURNAL, made special reference to the recent death of Sir Frederick Mott, an old friend of his own, whom he regarded as a man possessed of quite exceptional qualities, who applied to this most difficult realm of medicine a scientific precision and thoroughness which was quite out of the ordinary, and was a very sincere believer in the possibilities of improving the human race.

Sir FREDERICK WILLIS (of the Board of Control) proposed the toast of "The Guests," coupled with the names of the Right Hon. Hugh Macmillan, K.C. (Chairman of the Royal Commission on Lunacy and Mental Disorder), and the Bishop of Southwark.

Sir HUGH MACMILLAN replied in an eloquent speech. Referring to the imminent appearance of the report of

grade insulin depended upon careful steering through a maze of operations, success in the final stage being largely due to Dr. Dudley's method of precipitating the insulin with picric acid, and subsequently regenerating it as hydrochloride. The preparation of thyroxine, originally discovered by Kendall, had recently been greatly improved by the introduction of Harington's method, whereby twenty-five times as much thyroxine was produced. The advantage of thyroxine was that, being a crystalline chemical substance, its purity could be determined by chemical means. Mr. Carr said that the manufacture of hormones which he had described had been achieved by the alliance of manufacturers with State laboratories and universities; and in both cases substantial reduction in cost had been achieved, bringing the prices well within the reach of the poor.

Dr. H. A. D. JOWETT sketched the history of adrenaline down to the present day, when the isolation and identification of the hormone had been completed and the synthetic process had been worked out on the commercial scale, so that a synthetic adrenaline—identical in all respects with the natural product—was available and was sold under the name of "suprarenin synthetic."

Dr. G. BARGER, F.R.S. (Edinburgh), described recent progress in the chemistry of thyroxine, referring in particular to the work of Kendall and Harington, of which an account in some detail was given in our issue of June 26th (p. 1092).

The difficulties attending the biological assay of hormones were discussed by Dr. J. W. TREVAN. They depended, he said, almost entirely on the variability of the animal or organ used as the indicator of potency. Not only did different individuals of the same species give different responses to the same drug, but the responses varied from day to day in the same animal. A biological assay must, therefore, always take the form of a direct comparison with a standard preparation. The specification and preparation of international standards for insulin and pituitrin by the Health Committee of the League of Nations would render the provision of preparations of constant activity much easier, and it was to be hoped that tests for the other hormones would be devised of sufficient accuracy.

ROYAL MEDICO-PSYCHOLOGICAL ASSOCIATION.

THE annual meeting of the Royal Medico-Psychological Association in London, the earlier proceedings of which were reported in our last issue, was continued from July 14th to 16th, under the presidency of Dr. J. R. LORD.

Encephalitis Lethargica.

Some observations on encephalitis lethargica were contributed by Dr. MACKENZIE WALLIS, and in another paper Dr. C. FARRAN-RIDGE described some symptoms referable to the basal ganglia occurring in dementia praecox and epidemic encephalitis. Dr. Wallis said that the chief feature of encephalitis in laboratory animals appeared to be the profound effect on the kidneys, liver, and spleen; there was an almost complete absence of nervous symptoms. Evidence was shown of hepatic insufficiency and also of hyperglycaemia and glycosuria, but these changes did not appear to be confined to encephalitis; they occurred in other filter-passing diseases—vaccinia, for example. The experimental investigations furnished an approach to the clinical problem of encephalitis lethargica in man. Dr. Wallis described the tests which he had employed—namely, the laevulose tolerance test, the lipase content of the serum, and the cholesterol content of the blood—and said that forty cases of undoubted encephalitis lethargica had been investigated by means of the tests for hepatic insufficiency, and twenty-five of them showed evidence of hepatic derangement. Many of these cases came to the *post-mortem* room, where the tests were confirmed by histological examination. The acute cases had shown a raised lipase content and also a raised cholesterol content of the blood, and a positive indirect van den Bergh test. The most striking results occurred in cases of mid-brain tumours. The relation of the mid-brain to the carbohydrate metabolism and to the hepatic function had received further confirmation from these results.

Educational Provision in London for Subnormal Children.

The members of the association paid a visit to the London County Hall, where they were received by the chairman and vice-chairman of the Mental Hospitals Committee (Mrs. Dunn Gardner and Mr. A. C. Moreing) and the chief officer of the mental hospitals department (Mr. H. F. Keene).

Dr. F. C. SHRUBSALL read a paper bearing the title "Educational adaptation of the individual child," which was in reality a statement of the educational provision in London, especially for subnormal children. He said that the number of schools for the blind and deaf was 48, for the physically defective 37, for the mentally defective 78, and for tuberculous or pre-tuberculous children (open-air schools) 12. The number of school doctors was 89, of whom 25 were on whole-time engagements, and the children examined in 1925 numbered 316,722, or about half the total number of pupils in the elementary schools. Children were examined four times in their school career—first on entrance, then during the years in which they attained the age of 8 and of 12, and finally a few months before leaving school in their 15th year. The improvement of the physique of the children, Dr. Shrubsall claimed, had been very marked, and there was evidence that the 8-year-old boy averaged half an inch taller, with a similar gain in weight, as compared with the boy of corresponding age twenty years ago. He gave some interesting particulars of the psychological investigations pursued. About one child in ten showed superior abilities, and the attempt was made to select such children by examination at 11 and transfer them from the elementary to the secondary schools. Altogether the child was now considered as an individual, and attempts were made to modify the educational machinery to suit the child rather than to follow the former procrustean method whereby the child was made to fit the machinery.

Afterwards the members were shown over the County Hall, visiting the magnificent council chamber, also the medical examination rooms and laboratories, and then they inspected the automatic telephone system, and the lighting, ventilating, and heating arrangements. Practically all the rooms have indirect lighting by means of bowl fittings. In the sub-basement the visitors saw the six boilers which supply hot water through thirty miles of pipes to more than two thousand radiators.

Psycho-Analysis and its Development.

On Thursday morning (July 15th) a discussion on psycho-analysis and its development was opened by Dr. W. A. POTTS, who said that in the mind there was a mass of past experiences which could not be readily remembered, and some of a person's mental processes eluded his observation. The modern psychologist said that the forgotten memories and the hidden mental processes were in the unconscious or the subconscious mind, which was below the threshold of personal consciousness. Freud's method of exploring the unconscious mind was termed psycho-analysis, and was founded on the idea that dreams were neither accidental nor meaningless, but constituted the royal road to the unconscious mind. Freud found in this unconscious mind the real motives of unusual conduct; he held that the unconscious consisted largely of unfortunate experiences in early life, many of them of a sexual nature, and that the abnormal conduct was due to a conflict between the conscious and the unconscious minds, owing to primitive desires being stifled. In Freud's view, sex included such fine instincts as the love of the mother for her child. One of the chief objects of psycho-analysis was to discover repressions. It had been unjustly urged against psycho-analysts that to regard desires as natural meant that they should have indiscriminate gratification; nothing should be encouraged which would be against either the community or the individual. Jung did not agree with the emphasis which Freud placed on sex, and contended that present ideas often had more power than had past experiences. Dr. Potts avowed himself an adherent to Jung's school. The object of the analyser was to draw the patient to a conception of the manner of man he was, and that his troubles were really part of general human

nurses, the specialists, the *x*-ray photographs, or whatever may be needed in a particular case, would be obviated if their private doctors could send them to a large medical centre where all the specialists and all the necessary equipment were concentrated.

Rich Americans have been quick to recognize this, and have found the necessary money to build wonderfully equipped hospitals containing large blocks in which there are rooms varying in luxuriousness to suit the individual, and of course the price varies. They pay the hospital fees for the use of operating theatres, special departments, and special nurses if they want them, and they pay their doctors privately with the exception of the resident medical staff.

This arrangement seems to me excellent from the point of view of everyone concerned. From the well-to-do patients' point of view because they can obtain every luxury and comfort to be found in an expensive nursing home, combined with the use of equipment and organization which can only be found in a large general hospital, and with the services of a resident medical staff. From the poor patients' point of view because there will be less difficulty in finding the necessary funds for keeping the hospitals up to date and for perfecting the service and equipment; they will have better hospitals and more beds, because there will be more money to provide them.

With great diffidence I suggest that from the general practitioner's point of view it is excellent, because by sending his emergency cases to a fully staffed and equipped hospital he will be relieved of a thousand anxieties. Instead of having several really severe cases on his hands at long distances apart from one another and from his own home, he will have them concentrated in one place surrounded by every appliance and instrument that can be needed, and with a qualified medical man on the spot to carry out his instructions. He will no longer have to find nurses for his patients at all hours of the day and night, and be called out to visit them perhaps unnecessarily. He will only be called upon to give instructions as to treatment to a properly trained staff, and they will see that his instructions are carried out intelligently. I cannot help feeling that when every class has acquired the habit of going to a hospital when very ill the life of a doctor will become far more enjoyable, with reasonable hours of leisure and nights of comfortable sleep such as are enjoyed by other members of the community.

The same arguments apply to the specialists. They will spend far less time in motoring from place to place to carry out their work under exhausting and unfavourable conditions. Most of their work, with the exception of consultations, will be carried out in the hospital rooms and theatres and departments with ample equipment and a staff which understands their methods. They will in some cases be freed from the trouble and expense of providing apparatus in their own homes and of maintaining it there, and will have the satisfaction of employing for the benefit of their private patients the very expensive apparatus and buildings which they themselves have advised their committees to provide for the benefit of their poor patients.

From the hospitals' point of view the arrangement would mean freedom from financial worry, and the ability to produce a service which will not be cramped, either as regards its quality or its extent, by a lack of funds. The hospitals will be serving the whole community, and collectively the community will in return provide ample funds.

A further great advantage from everybody's point of view would be that the whole of the medical profession in a district would be brought into close contact with the hospital, which would consequently become a sort of continuous graduate school and a centre for the exchange of medical knowledge and experience.

I was staying last summer with an American physician on Long Island, where the population is increasing very fast. A hospital of about eighty beds was wanted in a small town there, and when I arrived they had just issued an appeal to build it. In a few weeks they had raised £300,000. So far as I could make out everyone subscribed as a matter of course in a businesslike sort of way, because everyone, rich and poor alike, realized that the time might come when they themselves would need hospital treatment, and therefore it was a question of common sense to provide the best hospital possible. Maintenance in America seems to be still easier. The expenses of the patients who cannot afford the whole of their cost is met by the profit made by treating the rich. A man who can afford it may have a beautiful tiled bathroom, and even a sitting room for his relatives next door to his own; these cost practically nothing to maintain, but the rich man may like to have them when he is ill, and certainly will not mind paying a few guineas a week extra for them. This is clear profit to the institution, which consequently prospers and improves in many ways. It makes it possible to improve the diet of the poor patients, to increase the salaries of the nursing staff, and so to attract more and better brains to the profession, and so on. In fact, there is no end to the improvements that could be made if the committees had enough money, and I believe the money would be forthcoming if doctors and hospital managers combined to give the public what they want on the lines I have suggested. One often hears English business methods criticized on the ground that many firms are content to go on turning out certain articles, which they have produced for generations, without paying enough attention to changes in fashions and customs, with the result that by slow degrees their prosperity becomes less and less. I suggest with the greatest respect that this criticism might fairly be levelled against hospital managers and their staffs, and against the whole medical profession who have grown up under the voluntary hospital system. The economic conditions of the country have changed very greatly, but the voluntary hospitals are still clinging to their old traditions and are trying to limit the scope of their work within traditional boundaries. The public are trying their best to fit themselves in with the old system because they respect it and have a very real affection for it, but during the past two or three years friendly criticisms of the system and demands for its extension have been greatly on the increase.

I sincerely hope that the medical profession will combine with the hospital managers to expand and remodel the existing system of institutional treatment to suit the changing needs of the public, before the whole matter is taken out of their hands by purely commercial bodies, who will be prepared to undertake the paying side of the work as a profit-making concern, leaving the remainder for the voluntary hospitals to deal with under conditions which must become increasingly difficult as the various forms of treatment become more elaborate and expensive.

If the hospitals, starting as they do with fine equipment and buildings, and possessing great experience, will respond to what I think are the wishes of the public, they will put themselves in a strong position financially, and by a wise use of their money will become such an efficient as well as indispensable feature of the nation's life that their continued existence will be assured.

England and Wales.

Vital Statistics.

THE Registrar-General's *Statistical Review*[1] of England and Wales for 1924 has been issued. The number of deaths (473,235) is the smallest registered since 1857, when the population was only 56 per cent. of that estimated for 1924. They correspond to a rate of 12.2 per 1,000 of the estimated population, but when standardized this rate is reduced to 10.7. The standardization was effected by comparison with 1901 when the population included relatively few infants and old people; it formed, therefore, a standard exceptionally favourable to low mortality and accordingly yielded comparatively low standard rates all round. To correct any wrong impression thus produced and to provide standard rates comparable with those of other countries the standards recommended by the International Statistical Institute were used, when the rate was increased from 10.7 to 12.0 per 1,000. The standard rate of 10.7 was less than any returned prior to 1923, when the low record of 10.3 was reached. The increase of mortality, which applied equally to each sex, occurred entirely in the first quarter of the year, when the death rate rose from 13.2 per 1,000 in the previous year to 16.6. The rate for the second quarter was lower than for any of the previous nine years, except 1921, and those of the third and fourth quarters were the lowest yet recorded. The excess in the first quarter occurred chiefly in March and was largely due to influenza, but the rate was high for a number of other diseases also, and it would appear that the conditions during March were such as to hasten the advent of death when impending from many causes not otherwise affected by season. The rate of infant mortality was 75 per 1,000 births, and was the lowest recorded, except in 1923, when it fell to 69. In a section on the distribution of infant mortality it is shown that the rates for the county boroughs and for the North of England are, as usual, in considerable excess, the highest rate being 99 for the northern county boroughs, and the lowest, 51, in the rural districts of the south. Taking the country

[1] New Annual Series, No. 4 Text. H.M. Stationery Office, London, Manchester, Cardiff, and Edinburgh, or through any bookseller. Price 5s. net.

the Lunacy Commission, he declared, amid laughter, that he was shortly starting on a voyage to Canada to escape the criticism with which it might be met. He paid a warm tribute to the medical profession for the great assistance which every member of it who was asked gave to the Commission during its sittings, and said that the report represented a sincere effort to assist the profession, and this special department in particular, in its noble task.

The BISHOP OF SOUTHWARK also replied.

Sir ARTHUR ROBINSON, K.C.B., proposed "The Royal Medico-Psychological Association," which, he said, was approaching its centenary, full of influence, power, and wisdom; he conveyed the good wishes of the Minister of Health to the association and the profession for success in its great task. With regard to the coming report of the Lunacy Commission, he had never seen, in all his experience, a commission so ably presided over as was this, and he had nothing but praise for the way Sir Hugh Macmillan did his work.

The PRESIDENT (Colonel Lord) replied, making mention of hospital clinics for early mental disorder, and the high aim of the mental hospitals of the country.

AMERICAN HOSPITAL FINANCE AND ADMINISTRATION.

LESSONS FOR BRITISH VOLUNTARY HOSPITALS.

As already mentioned (April 24th, p. 740), Mr. A. G. E. SANCTUARY, M.A., administrator of the Radcliffe Infirmary, Oxford, recently read a paper to the Oxford Division of the British Medical Association, describing certain aspects of the administrative policy and financial methods of American general hospitals which he thought should be imitated by British voluntary hospitals for the benefit of the public, the improvement of the service they afford, and the relief of their financial embarrassments.

America, Mr. Sanctuary said, possessed a complete and comprehensive system of hospital service which dealt with every section of the community at a cost varied to suit the pocket of each member of it. The accommodation and equipment were, he thought, on the average better than ours, and afforded the accommodation the public demanded. This was because the hospitals were not continually struggling to avoid bankruptcy.

One reason, but not the only reason, was the amazing prosperity of the nation, but there was, he thought, quite enough spare money in England to pay for a complete and comprehensive hospital system. He urged the managers of our voluntary hospitals, with the support of the medical profession, to undertake the in-patient treatment of every section of the community, and thus enlist the sympathy and financial support of every class, instead of confining their attention to the one class which cannot pay for itself.

It was well known, he said, that plans were in existence for the replacement of the voluntary system by some form of State-controlled hospitals; the case for this change relied mainly upon the fact that the present system failed to produce enough beds. It must be admitted that owing to lack of funds the needs of the community in the way of institutional treatment were at present inadequately met. First, there were not enough beds in the voluntary hospitals to take in the greatly increased number of patients who had a moral claim to treatment in free or partially free wards and could only afford to pay a fraction of the actual cost of their treatment, and by common consent could not pay an adequate fee to the physician or surgeon who attended them. Secondly, there was a very large class for whom no suitable provision was made and who consequently drifted into hospital wards and added to the congestion there. This class would be able to pay an adequate fee for board, lodging, and nursing, and for the use of the hospital's special equipment as they required it, and also a modified fee to the doctor, especially if they did so by an insurance scheme. Thirdly, there were the well-to-do classes, who had been content hitherto to pay large and often exorbitant fees for accommodation in nursing homes which did not contain a quarter of the equipment considered necessary for the treatment of the poor in the voluntary hospitals. They were even content in emergencies to undergo operations in their own homes under conditions which would not be tolerated in a hospital, because no nursing home accommodation was available or because the charges were so high. It was certainly very greatly to the credit of this class that they should so long have continued to find large sums of money for the establishment and equipment of hospitals from which they were themselves debarred, in spite of the fact that they could get nothing so good outside. The problem of providing all three classes with adequate institutional accommodation in times of serious illness at a cost which collectively they could afford to meet could, he believed, only be solved if treated as a whole, as had been done in America. He continued as follows:

The quickest and most economical way of providing large-scale, perfectly equipped hospital centres for the treatment of every class is by extending the existing voluntary hospitals where a large part of the necessary equipment and staff already exists and among whose committees and medical, nursing, and lay staffs most of the hospital experience and tradition of the country are to be found.

The maintenance of such hospitals would not, I am inclined to think, present nearly such great difficulties as are faced under our present system It has been proved that by organized weekly contributions of various kinds the poorest section of the community can pay from one-half to two-thirds of the actual cost of their treatment, the remainder being made up by charitable donations. The next class of patient, with incomes varying, say, from £300 to £750, could by means of insurance easily cover the cost of their treatment and doctors' fees, and leave a balance of profit to the institutions treating them, whereas at present they are driven into beds which are meant for the use of a poorer class, and pay less than they can afford. A smaller percentage of this class would require institutional treatment, because their home conditions are more suitable for treatment of certain illnesses than are those of the poorest class. Insurance schemes are already in existence which cover their policy-holders against the cost of specialists' fees and of nursing homes up to a certain maximum—a very much higher maximum than they are in a position to pay without the help of such schemes. These schemes would, I think, be readily joined if only the right sort of accommodation were provided, and it can only be provided at reasonable cost by the existing voluntary hospitals. The results of this extension of the present voluntary system would be:

(1) A large and deserving section of the population would be relieved of great anxiety and in some cases of severe economic distress, as they would be able to avail themselves freely of proper hospital equipment when they needed it without either crippling themselves financially or taking advantage of the voluntary hospitals and their honorary medical staffs.

(2) Their private doctors would be relieved of anxiety on their behalf and would not be placed in the invidious position of having to advise them to make use of accommodation and voluntary services, which they greatly dislike using and which is already insufficient for its proper purpose. They would also, under such a scheme, I hope, be able to continue to attend their patients in hospital to the same extent as they now do in nursing homes.

(3) The specialists would receive adequate payment for the work they do instead of doing it for nothing.

(4) The hospitals would receive a regular income, a part of which would be available for the upkeep of their special departments and overhead charges. Their ordinary ward beds would be relieved of pressure. They would, moreover, have enlisted the direct sympathy and help of a very large class, who at present are very little interested in hospital matters. The medical profession has already accepted the principle of dealing with this class in hospital by making use of wards in cottage hospitals for their private patients.

I think both hospital managers and doctors are generally agreed that an extension of our voluntary hospitals is desirable, but I do not think that this extension goes far enough. The people who have hitherto subscribed most of the money for the building and equipment of the hospitals are not satisfied on the whole with what they are getting in the way of institutional treatment. If the voluntary hospitals were prepared to offer them what they want in the way of first-class nursing home accommodation, and to put at their service the whole of the equipment of their special departments, operating theatres, resident and nursing staffs, and so on, I feel sure that their generosity would be greatly stimulated, particularly in the case of the large and influential class of professional and retired men who just manage to pay their way in times of serious illness, but who have nothing left over for the support of charitable institutions. One has heard such people say over and over again that they wished they could go to a hospital when they are really ill, and that their servants' families get a better chance in emergencies than they do. It is obvious that the delay and discomfort involved in getting hold of the

formally opened on July 3rd by Lord Provost Sir William L. Sleigh. The first block of the settlement consists of a substantial building containing five houses, each house including a living room and small kitchen downstairs, with two bedrooms and other accommodation upstairs; a generous amount of garden space is allowed to each tenant. Lord Salvesen, chairman of the association, who presided at the opening ceremony, said that in the eleven years since the association had commenced to ask for subscriptions nearly 200 houses for disabled men and their families had been provided. These houses were at present inhabited by something like 1,000 people, so that the association had done something towards both solving the housing problem and repaying their debt of gratitude to the men who had suffered most in the war. The Lord Provost, in declaring the settlement open, said that the work of the association had extended all over Scotland, and the present was the eighteenth settlement where disabled men could live in comfort and bring up their families amidst healthy and pleasant surroundings. Although no actual rent was charged for the houses the occupant was called upon to pay the rates and taxes and other oncosts. He believed that no other country was in possession of a scheme such as this. It was mentioned that the cost of each house was now about £600.

Correspondence.

CARCINOMA OF THE PROLAPSED CERVIX.

SIR,—The JOURNAL of July 3rd (p. 12) contains an interesting Memorandum on carcinoma of the prolapsed cervix by Mr. N. A. Macleod, in which he remarks that prolapse and cancer of the cervix, though individually common in the same class of cases, very rarely coexist. He also suggests that cancer is less liable to develop in the prolapsed cervix than in the non-prolapsed.

I have been wondering whether the conjunction of the two conditions is really rare. When cancer is found, coexistent prolapse is often ignored and the case is classified and recorded as one of cancer. Again, cancer of the cervix of the common columnar-celled type soon extends into the parametria and fixes the uterus. The majority of cases are only seen after this has occurred, when preexistent prolapse has already been more or less cured by fixation, so to speak, and is no longer obvious. In cases of the stratified squamous type, like Mr. Macleod's Case 1, fixation of the uterus occurs much later than in the common type.

There are other conditions which are seldom seen together with prolapse, a notable example being complete rupture of the perineum Pelvic cellulitis is another good example. It fixes the uterus by inflammatory infiltrate in the parametria and thus it prevents prolapse in some cases and cures it in others.

The first case of cancer of the vagina I ever saw was in a procidentia under the late Dr. Lloyd Roberts. It is figured in my handbook of *Diseases of Women*. I have always taught that one should operate for prolapse by the vaginal route, and should try to exclude cancer by exploring with a curette both the cervical canal and the uterine cavity. During this routine preliminary examination I have three times found early unsuspected cancer of the body of the uterus, and more frequently cancer of the cervix. On each occasion a radical operation has, of course, been done instead of the plastic operation.

High amputation of the cervix is an essential part of my own operation for uterine prolapse, which thus has the advantage that in addition to curing the prolapse it frees the patient from the risk of the subsequent development of cancer in the cervix. This risk remains after operations like ventral fixation.

Early cancer originating within the cervical canal may escape detection by the curette. Only last week the senior resident at St. Mary's Hospitals, Manchester, sent to the laboratory a cervix he had removed for prolapse, and received a report that on section it showed distinct evidence of carcinomatous change. Thus it is desirable that every suspected cervix removed for prolapse should be submitted to microscopic examination. If early cancer is found the surgeon will decide between radical operation and the use of radium according to the circumstances of the case.—I am, etc.,

Manchester, July 15th. W. E. FOTHERGILL.

RHEUMATIC HEART DISEASE IN CHILDREN.

SIR,—I would like to congratulate the Science Committee, and through it the Association in general, on the excellent report on rheumatism and heart disease in children. It is very typical of the English character to depreciate our own efforts and laud those of our neighbours, and whilst one recognizes perfectly and congratulates very heartily the Americans on their progress in supervision of children suffering with cardiac lesions, self-depreciation can be carried a little too far, and I am quite sure that the report gives a needlessly pessimistic view of the stage to which treatment of this condition has arrived in England. Whilst this may be good propaganda, it may still be bad policy.

The investigations with regard to treatment seem to have been made through the school medical officers, whose interest in the subject may be gauged by the percentage of replies. Possibly this line of investigation was adopted advisedly, but it seems strange that the authorities actually treating—as distinct from tabulating—the largest number of sick children should have been so carefully ignored. Of course, at present it is highly improper to suggest that boards of guardians ever did anything right, more particularly as regards their work for the sick; but possibly reference to the work of the Manchester Board of Guardians with regard to its attitude towards its sick children may be illustrative of what is taking place more or less throughout the country, though it be not widely advertised.

The essentials of treatment as laid down in the memorandum are: (1) provision for prolonged treatment, including rest in bed for an indefinite period, with mental stimulus and suitably graded finger work; (2) adequate attention to septic conditions, particularly of the mouth and tonsils; and these conditions are entirely met by the scheme at present worked by the Manchester guardians. Five years ago the dentist visiting Booth Hall Infirmary for Children began to examine the mouths of children suffering particularly from carditis and tuberculosis of any type. He renders these as free from sepsis as he can at the earliest possible moment after their admission. Three years ago the aurist began to pay similar attention to the throats and noses of these children, and enucleation of tonsils is carried out by him when considered needful. Provision is made at the above-named hospital for treatment as prolonged as may be necessary, and when cases become ambulatory they are, on the recommendation of the visiting physician, Dr. Hugh T. Ashby, recommended for transfer to one of two convalescent homes. In one the children are up practically all day, and go to the school provided in the home until such time as Dr. Ashby considers they may be transferred home. In the other, dealing with more serious cases, rest and exercise are carefully regulated. Between these three institutions there is complete co-ordination. Children are transferred from the convalescent homes to the hospital, or vice versa, when occasion requires, by means of motor ambulances. On a child being discharged home the Invalid Children's Association is notified of the fact, and the chain of supervision becomes as complete as can be arranged.

The guardians are of opinion that they have provided as complete and efficient a scheme as need be desired, but they certainly do not imagine that they are the only authority endeavouring to meet the very serious needs of this difficult type of case.—I am, etc.,

J. D'EWART,
Medical Superintendent, Booth Hall Infirmary.

Manchester, July 17th.

THE PROPHYLACTIC VALUE OF SCARLET FEVER ANTITOXIN.

SIR,—Dr. E. H. R. Harries, in his interesting communication to the BRITISH MEDICAL JOURNAL of July 17th (p. 134), refers in his concluding paragraph to the pro-

as a whole, the fall of 6 per cent. as compared with the preceding quinquennium was accounted for by a decline in the number of deaths attributed to diarrhoea, congenital debility, and convulsions. There was an increase from bronchitis and pneumonia. The reduction of mortality at ages 1 to 5 has been greater than in that of infants. As was pointed out in the report for last year, this is the period of life at which susceptibility of mortality to environment is greatest, so it is probable that improvement in the conditions under which the children were living has been the main factor in bringing about this remarkable change. For this improvement the fall in the birth rate may be largely responsible, but if so it "cannot be expected to continue for long at the recent rate, for the birth rate, though it may continue to fall, cannot long do so at the present rate consistently with national survival." These seem to be the chief broad conclusions the Registrar-General draws from the statistics at his disposal. We hope to recur to the report later on.

THE CARE OF CRIPPLES IN HERTFORDSHIRE.

The annual meeting of the Hertfordshire branch of the British Red Cross Society was held, through the kindness of the Hon. A. Holland Hibbert, in the beautiful grounds of "Munden," near Watford, on July 16th. Hertfordshire bore its part worthily in Red Cross service during the war and did not allow its organization to fall into decay after the stoppage of actual warfare. In 1919 the energies of its Voluntary Aid Detachments were diverted largely to the service of a number of massage clinics which were established for the benefit of ex-service men, and their scope was afterwards widened to include the treatment of civilians of all ages.

Advantage was taken of this organization when the care of cripples came to be considered, and the six orthopaedic centres which now exist in the county work side by side with the massage clinics, of which there are now nine, and with the after-care centres at Hertford and Hoddesdon. The members of the Voluntary Aid Detachments staffing these centres are now so efficient that the latter are equivalent to out-patient departments, where all sorts of plaster work are carried out, and almost the whole treatment, except that requiring cutting operations, for which patients are admitted to the Royal National Orthopaedic Hospital under the honorary visiting surgeon, Mr. S. L. Higgs. Hertfordshire is exceptionally well supplied with railway communications from south to north, but very badly off for transit from east to west. In consequence it is found that London, where the Hertfordshire County Council meets, is the most convenient centre for the whole county, and the Royal National Orthopaedic Hospital, with its country branch of 118 beds at Brockley Hill, is more conveniently situated than would be any possible hospital placed near the geographical centre of the county. The present arrangement has the advantage of securing that the patients are in the care of the same orthopaedic surgeon from first to last. During the year ending March 31st, 1926, there were over 21,000 attendances at the massage clinics; a number of these patients were no doubt orthopaedic cases, and there were 1,458 attendances at the orthopaedic centres; of these, 335 were new cases, and on them 338 reports were made to the medical practitioners in whose care the patients had been. This system leads to improved co-operation as well as efficiency, and obviates possible causes of friction. The annual report, while it shows good progress in the efficiency of the Hertfordshire branch, demonstrates the need of more financial support. Watford, in particular, which is the most populous of all the centres, is not self-supporting, but draws upon the county funds. The Hon. A. Holland Hibbert, in a humorous and effective speech at the meeting, appealed forcibly to Watford to remove this stain from its reputation.

After the business of the annual meeting Mr. Muirhead Little, F.R.C.S., addressed the members on the cure and care of cripples generally, and on the work of the Central Committee. He pointed out that, although crippling as the result of tuberculosis and rickets might be expected to decrease perhaps rapidly, it was far otherwise as regards infantile paralysis. For aught that was known, this country might suffer from an epidemic comparable to those that had occurred in Sweden, Germany, New England, and, above all, in New York. In the case of such a misfortune, the county clinic organization would be invaluable, for it was susceptible of rapid expansion with a minimum of friction. The main points to be attended to in any district scheme were: (1) that every case of incipient crippling, whatever its cause, should be detected and at once treated at a clinic; (2) that there should be no delay in gaining admission to hospital of cases that required hospital treatment; (3) that after treatment in hospital or clinic was complete every case should be kept cured by the necessary care at a clinic; (4) that during hospital treatment education should be carried on; and (5) that industrial training should be available for all cripples over school age. The Central Committee for the Care of Cripples had obtained for a scheme of this kind the provisional approval of the Ministry of Health. It suggested a special committee in each orthopaedic area containing representatives from the hospitals and clinics, who would know the capacity and limitations of the cripples from the surgical point of view, together with representatives from the Juvenile Employment Exchange, employers, and trade unions, who would know local trade conditions and appointments. Hertfordshire was far advanced along the right line, but for a certain number of cases whose home surroundings were not good a convalescent institution was needed. It should be an open-air home, of simple and therefore cheap design and construction, as might be studied in the Cripples' Hospital at Coombe Park, near Bath; to begin with it need have not more than twenty beds. The address of the Central Committee is 117, Piccadilly, W.1.

Scotland.

CHAIR OF OBSTETRICS AND GYNAECOLOGY IN EDINBURGH.

DR. ROBERT WILLIAM JOHNSTONE, C.B.E., M.A., M.D., F.R.C.S., has been appointed professor of midwifery and diseases of women in the University of Edinburgh, in succession to Professor B. P. Watson, who was recently appointed to the corresponding chair in Columbia University, New York. The new professor is a son of the late Rev. Professor Robert Johnstone, D.D., of the United Free Church College, Edinburgh. He received his early education at George Watson's College, Edinburgh, and graduated with honours in medicine at Edinburgh University in 1903, subsequently pursuing post-graduate studies in Vienna and Prague. From 1906 to 1919 he was assistant to the professor of midwifery in the university. During the war he was successively surgeon to the Royal Victoria Red Cross Hospital, a surgical specialist in France, and later held a post in the Ministry of National Service in London. Returning to Edinburgh in 1919, he became Dean of the School of Medicine of the Royal Colleges, and up to the time of his present appointment was physician at the Royal Maternity Hospital and assistant gynaecologist in the Royal Infirmary, Edinburgh. He has also conducted a successful class as lecturer on midwifery and gynaecology in the School of Medicine of the Royal Colleges at Edinburgh. Professor Johnstone has made numerous contributions to the current literature of his subject, upon such aspects as "The pathology of pelvic infection," "Scopolamine and morphine in labour," "Unsolved physiological problems in gynaecology and obstetrics," and "Results of operative treatment of intrinsic dysmenorrhoea." The work by which he is best known is his valuable and highly successful *Textbook of Midwifery*, published in the Edinburgh Medical Series, which has now reached its fifth edition. Great satisfaction is expressed in Edinburgh that the curators of the chair have selected for the post an Edinburgh man, who may be trusted not only to be familiar with, but to enhance the traditions of, the chair previously occupied by Hamilton, Simpson, and Croom.

HOMES FOR DISABLED EX-SERVICE MEN.

The Liberton Settlement for Disabled Sailors and Soldiers at Kaimes Crossroads, near Edinburgh, established by the Scottish Veterans' Garden City Association, was

Ministry of Health report on rheumatic diseases, published in 1924. Continuous attention was paid to them in deciding the administrative policy of the Ministry, which used all the pressure and influence it could bring to bear to secure the improvement of housing conditions which might cause rheumatic diseases in children.

Motor Drivers.—During the discussion on the estimate for the Ministry of Transport, on July 14th, Mr. Bromley asked whether, in view of the proposed introduction of coloured light signals for regulating road traffic, the Minister had made any provision to test motor drivers for colour-blindness; and Mr. Palin urged that driving licences should be granted only to applicants possessing satisfactory physical qualifications. Eighteen was young enough for the driver of a light motor vehicle, and 21 for a heavy lorry. He suggested also that the time for which a driver should be allowed to work ought to be limited, as was the case with railways and tramways. A fatigued driver was a danger to the public, and there ought to be prescribed periods of rest. In the course of his reply Colonel Moore-Brabazon (Secretary to the Ministry) said that the danger of dazzling headlights was becoming less every day. A vehicles bill about to be introduced would lay down standards for the weight of various types of vehicles. In reply to a question the Home Secretary said that during the first six months of this year the metropolitan police had taken out 3,000 summonses against motorists for excessive noise. The noise was due probably to inefficient silencers, particularly in the case of motor cycles. The question was being discussed between the Ministry of Transport and the Motor Cycle Manufacturers' Union. In answer to another question, the Minister of Transport said that complaints had been received with regard to the pollution of the atmosphere by steam-driven vehicles. The matter could be dealt with under the existing law, the enforcement of which was for the police.

Indian Opium.—The Home Secretary informed Mr. Ponsonby that 116,000 lb. of raw opium were imported into this country from India in 1925; 16,000 lb. were exported during the same year. The Indian opium retained in this country was used for the manufacture of morphine and other drugs and medicinal preparations. In five years 730 lb. of refined and 6,050 lb. of crude morphine hydrochlorate had been manufactured in India.

Notes in Brief.

Deaths from cholera registered during 1924 in Indian cities were: Calcutta, 1,250; Rangoon, 132; Madras, 96; Karachi, *nil*; Bombay City, 34.

Mr. Chamberlain told Mr. Kennedy, on July 15th, that he could not yet say which of the recommendations of the Royal Commission on National Health Insurance would be adopted by the Government nor when it would be possible to introduce the necessary legislation to give effect to them.

(*To be continued.*)

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

THE following candidates have satisfied the examiners in both parts of the examination:

DIPLOMA IN TROPICAL MEDICINE AND HYGIENE.—H. M. Ayres, J. L. Dunlop, Bandi Ethirajulu, N. E. Goldsworthy, Riad Abdel Noor Henein, *Farid Hilmy, Wasfy Omar, *Trilok Chand Puri, F. C. Tibbs, *Abdul Wahid el Wakil.

* Distinguished in the examination for Part II.

The following candidates have been approved at the examinations indicated:

DIPLOMA IN MEDICAL RADIOLOGY AND ELECTROLOGY.—*Part I*: I. Arons, Frances Dooley, H. Franklyn, L. Freeman, H. M. Grey, Elsie H. Parker, Constance A. P. Wood. *Part II*: I. Arons, A. E. I. Connolly, Jivan D. Dhruv, A. C. Dixon, H. H. Elliot, Mollie Fisher, H. Franklyn, Margery Freeborough, H. J. Louw, P. J. McKenna, Elsie H. Parker, R. Phillips, S. J. Rom, A. C. Rusack, J. O. P. Smith, H. T. Stack, J. G. Stephens, Constance A. P. Wood.

Medical News.

A DINNER arranged by the London Association of the Medical Women's Federation was held at the Welbeck Palace Hotel, on July 15th, in honour of Dame Mary Scharlieb. The President, Dr. Christine Murrell, presided, and the health of the principal guest was proposed by her old friend and fellow student, Dr. Jane Walker, who spoke warmly of her personal qualities and professional standing. Dame Mary Scharlieb was over 40 years of age before she ever had a scalpel in her hand, and now, at 81, she was still operating with unimpaired judgement and skill. Dr. Walter Carr paid tribute, not only to the outstanding surgical ability of Dame Mary Scharlieb, but to her high character. All her friends would rejoice at the national recognition of her services, which were the more valuable because the love of her fellow creatures had prompted them. Lord Riddell pointed out that the British virtues of courage, pertinacity, and ability were here combined with charm of manner and an unusual and enduring vitality. Sir Alan Anderson praised the pioneer spirit that was an inspiration to all younger women, and Lady Barrett, as dean of the London (Royal Free Hospital) School of Medicine for Women, spoke of the pride of all members of the school in the honour that had been conferred on Dame Mary Scharlieb. In reply, Dame Mary Scharlieb said that if life were a quest for happiness she had discovered how to achieve it in the love of God and of her friends. Among the guests present were Sir John Rose Bradford and Sir James Berry.

THE KING has been graciously pleased to confer the Territorial Decoration upon Lieut.-Colonel J. W. Craven, *M.C.*, and Major Charles Douglas, both of the Royal Army Medical Corps.

A SCHEME for a general contributory system of pensions, supported by King Edward's Hospital Fund for London, has now been accepted by sixty-nine of the hospitals in London. It will include nurses in all branches of the profession, as well as those in hospital service.

THE Committee upon the Physiology of Vision, appointed by the Medical Research Council at the instance of the British Medical Association, has issued a report (H.M. Stationery Office, 2s. 6d. net) by Mr. R. J. Lythgoe, M.A., B.Ch., founded upon recent literature on the relation of illumination to visual capacities.

As announced last week, the post-graduate medical hostel at the Imperial Hotel, Russell Square, London, W.C., will be opened on Monday next, July 26th. There will be a dinner (5s.) at 8 p.m., and at 9 a meeting over which Dr. Alfred Cox will preside, when Sir D'Arcy Power will give an address on the hostel and its objects; ladies will be welcomed. On Friday, July 30th, at 9 p.m., a discussion on the difference between inflammation and hyperplasia will be opened by Sir G. Lenthal Cheatle. All medical practitioners are invited to attend.

THE Fellowship of Medicine announces that the last of the demonstrations arranged for this session will be given by Mr. Dorrell at the Royal Eye Hospital, Southwark, on July 30th, at 3 p.m.; it will be open to members of the medical profession, without fee. In connexion with its intensive courses in medicine, surgery, and the specialties attention is directed to the formal lectures throughout the week at the Prince of Wales's General Hospital, Tottenham, at 4.30 p.m., which are open to members of the Fellowship. The West End Hospital for Nervous Diseases is providing weekly courses of lecture demonstrations until August 12th. Owing to unforeseen circumstances the intensive course at the Brompton Hospital for Chest Diseases has been cancelled. The entire clinical work of the hospital will be available, however, daily throughout the month to graduates on payment of the fee of 1 guinea. From August 18th to 28th the Queen's Hospital for Children will hold an all-day course, and the Queen Mary's Hospital has arranged an intensive revision course from August 23rd to September 4th. Practical courses in anaesthetics and courses in obstetrics and child welfare at the City of London Maternity Hospital can be arranged by the Fellowship. For full particulars as to details of these various courses inquiries should be made to the Secretary of the Fellowship, 1, Wimpole Street, W.1.

THE campaign for cancer research instituted by the University of Sydney was, according to an Exchange dispatch, formally launched at a meeting presided over by the Governor of New South Wales on July 14th. It is hoped to obtain £100,000; towards this amount £25,000 has already been subscribed.

THE house of the Royal Society of Medicine will be closed during August, but the library will be open on week-days from 11 a.m. to 6 p.m., except on Saturdays, when it will close at 1 p.m.

DR. ARTHUR CUSHNY, professor of materia medica and pharmacology in the University of Edinburgh, left estate of the value of £22,140, with net personalty of £21,984.

THE Secretary of the Department of Scientific and Industrial Research announces that a licence has been issued by the Board of Trade to the British Food Manufacturers' Research Association, which has been approved by the Department as complying with the conditions laid down in the Government Scheme for the encouragement of industrial research.

THE seventh Congress of Italian Industrial Medicine will be held at Genoa from October 12th to 15th under the presidency of Professor G. B. Ramoino. Among the subjects to be discussed are individual conditions and organic changes in persons affected by electric currents, and workmen's dwellings. Further information can be obtained from the general secretary, Dr. Agostino Crosso, Via Frugoni 19, Genoa.

A POST-GRADUATE course in tuberculosis will be held at the Strasbourg Faculty of Medicine under the direction of Professors Canuyt and Vaucher, from October 10th to 25th. The fee is 200 francs. Further information can be obtained from Professor Vaucher, Rue de l'Université 22, Strasbourg.

duction of active immunity to scarlet fever in the staff of the Birmingham City Hospitals. The following figures, having reference to this subject, are of interest as indicating the apparent result of active immunization at the Fazakerley Hospital.

Year.	No. of new probationers entered.	No. who contracted scarlet fever.
1921	39 ...	... 4
1922	26 ...	... 2
1923	47 ...	... 2
1924	66 ...	... 10 (1 fatally)
January 1st to June 30th, 1925	20 ...	... 1
July, 1925, to July, 1926...	54 ...	... 0

Active immunization was begun in July, 1925.—I am, etc.,

C. RUNDLE,
Medical Superintendent, Fazakerley Hospital, Liverpool.

July 17th.

Medical Notes in Parliament.

[FROM OUR PARLIAMENTARY CORRESPONDENT.]

Registration of Nursing Homes.

THE report of the Select Committee of the House of Commons on the Registration of Nursing Homes was published on July 19th.

RECOMMENDATIONS.

Its recommendations are thus summarized :

(i) That legislation to give effect to a scheme of registration and inspection of nursing homes should be introduced at an early date.
(ii) That the supervising authorities should be county councils and county borough councils.
(iii) That supervising authorities may well be empowered to delegate their powers to a committee upon which both doctors and nurses shall have some representation.
(iv) That the duties of inspection shall be carried out by medical officers of health with the assistance of other technical officers.
(v) That inspection shall be limited to the general suitability and organization of the home, and shall not embrace any inquiry into the medical records or private affairs of the patients.
(vi) That the definition of the term "nursing home" shall be made wide enough to include all types of nursing homes, including maternity homes.
(vii) That certain publicly controlled institutions shall be expressly excluded from the scheme.
(viii) That supervising authorities may exempt certain charitable organizations for defined periods of time.
(ix) That a nursing home shall not be exempt on the sole grounds that there is a medical practitioner resident in or in actual control of a home.
(x) That appeals against the refusal or cancellation of registration may be made to a referee appointed by the Minister of Health.
(xi) That, in spite of existing legislation in regard to maternity homes, all nursing homes, including maternity homes, shall be brought under one comprehensive scheme.

The Committee recommend that, subject to the provisional exemption by the supervising authority of existing homes at present controlled and staffed by unqualified persons, and to possible exemptions in special circumstances, it should normally be a condition precedent to registration that the matron or other person in charge of the nursing in any registered nursing home be a fully qualified nurse; and that, if and when nursing becomes a more popular and better paid profession, the extension of this condition to a certain proportion of the staff employed in the home will also become desirable.

COMMENTS ON EVIDENCE.

Nursing Homes Maintained by Doctors.

With regard to the claim advanced by the British Medical Association for exemption of doctors who receive patients for treatment into their private homes, the Committee say :

Many doctors take in single patients for treatment in their private houses; frequently such cases require no actual nursing but merely normal home life and the sympathetic companionship of intelligent persons. It is submitted by certain witnesses that the term "nursing home" cannot properly be applied to cases of this type and that registration is not required, would do no good, and would be strongly resented by the medical profession. There are a number of nursing homes and private hospitals directly controlled by medical men, and often having a medical officer resident therein. Strong representations have been made by the medical profession that, although there would be no objection to simple registration, such homes, particularly those with a resident medical officer, should be entirely exempt from inspection. If registration is considered necessary, it is suggested that the registration authority should place on the register any home controlled by a qualified medical practitioner who can submit to them certificates from two recognized medical men that he is a fit and proper person for the conduct of such an establishment. This system, it is pointed out, is already in operation in certain areas which have obtained powers for the registration and inspection of maternity homes. The Committee feel that there is much to be said for this point of view, but, on the other hand, they have had evidence put before them which indicates quite clearly that in certain cases there is very decided room for improvement in nursing homes under the direct control of a doctor. They feel that if an individual doctor decides, for purposes of gain, habitually to take in patients, whether into his private house or into a nursing home, he does so with the full knowledge that he is taking up a definite trade and entering into competition with other persons who have to comply with such regulations as may be enforced. Some medical witnesses have objected to the public display of the rules and regulations drawn up by the supervising authority, and to the exhibition of brass plates outside registered nursing homes. The Committee are opposed to any form of compulsion in this matter.

Inspection.

Discussing the evidence tendered to them the Committee say :

It has been strongly urged that inspections should be carried out by a qualified medical man, or woman, preferably by the medical officer of health or some similar officer on his staff and deputed by him. It has been pointed out that in many cases it would not be necessary to appoint special officers for the conduct of this work; in short, that it could be taken by medical officers of health in their stride. On the other hand, objections have been raised by a number of witnesses as to the ability of a medical man to inspect the efficiency of the nursing services and as to his capacity for criticizing the domestic arrangements of a home. It is suggested that a medical man is not trained in the art of nursing, and that he would be slow to criticize or interfere with such matters; further, that he would not be likely to detect with the same ease, if at all, minor irregularities in the domestic arrangements, which, although in themselves small, have a considerable cumulative effect upon the health and happiness of patients and nurses. A trained nurse, it is suggested, is the only person competent to inspect and criticize these details. (As stated in the summary, the Committee recommend that inspection should be by medical officers of health.)

Structural Deficiencies.

On the evidence presented the Committee are convinced that the dwelling house converted into a nursing home with its many structural deficiencies which cannot be overcome is, at any rate in acute surgical cases, a very poor and expensive substitute for the specially built, adequately equipped and staffed, hospital. It is, of course, true that at the present time there is a considerable demand for nursing home accommodation, and that in fulfilling this demand nursing homes serve a useful purpose, but development in the provision of accommodation for the paying patient should run more along the lines of the provision of specially built and equipped private hospitals and homes, and of the extension of the paying ward system in the existing big hospitals. The Committee note that the complaints from doctors who gave evidence were mainly directed to structural and sanitary defects in the buildings used as nursing homes, and to the lack of proper provision and equipment in regard to surgical cases.

Chronic Senile Cases.

With regard to chronic senile cases the Committee report as follows :

The Committee have been impressed with the urgent need for registration and supervision in that class of nursing home which caters for the poor senile chronic. It has been stated in evidence that it is impossible adequately to nurse and accommodate, in a private room, a patient under £5 a week. Unfortunately there exists a large class of elderly persons who although they are capable of making some payment are quite unable to find a weekly sum of this order The Committee consider that the general application of registration and inspection will do much to alleviate the bad conditions and suffering undergone to-day by patients of this class, but they strongly emphasize their opinion that this change cannot be regarded as a cure for these evils, but merely as a palliative. They feel that the problem can only be properly solved by the reorganization of the Poor Law system, and by the provision of proper paying accommodation by local authorities to meet needs. It has been made abundantly clear to the Committee that the provision of accommodation for the nursing staff in nursing homes of all grades leaves very much to be desired.

Bills.

On the motion of Dr. Fremantle, on July 14th, the amendments made in the Midwives and Maternity Homes Bill in the House of Lords were considered in the House of Commons. The amendment providing that the embargo against unqualified persons acting as midwives should not apply to the education of medical students or midwives was agreed to. Another amendment provided that a supervising authority might grant an exemption to a hospital, or other premises for which a duly qualified medical practitioner there resident was responsible, or any hospital or institution not carried on for profit and not used mainly as a maternity home. It was under consideration when the debate was adjourned.

The House of Commons read the Land Drainage Bill a third time on July 14th. It had already passed the House of Lords, where Lord Bledisloe, for the Ministry of Agriculture, had pointed out that inadequate land drainage adversely affected public health and also produced diseases in animals.

The British Medical Association's Report on Rheumatic Heart Disease in Children.—Mr. Chamberlain stated, on July 15th, that the recommendations in the British Medical Association's report on rheumatic heart disease in children were substantially in accord with the suggestions in the chief medical officer's preface to the